ABSTRACT

RIESTER, MELANIE LYNN. Organizational Readiness for Change: HIV Services in Correctional Settings. (Under the direction of Dr. RaJade M. Berry-James).

Using data from the National Criminal Justice Drug Abuse Treatment Studies, this research study investigated the factors that have a positive or negative effect on perceived organizational readiness to implement innovative HIV services in a correctional setting. Using ordinary least squares regression, this research found that goal clarity, technology, training value, employee experience, correctional setting (secured vs. community), and bi-directional communication are the most important predictors of perceived organizational readiness for change. However, when these organizational readiness predictors were applied to correctional settings, the direction of the effect contradicted the literature. This tells us that context really matters when it comes to organizational readiness. Context matters regarding the environment, such as whether the organizational system is open (community setting) or closed (secured setting), as well as the context of the actual change being implemented. In this case, implementing a HIV innovation in a correctional setting affected the results of this study, as there is a large amount of stigma around individuals infected with HIV.

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Organizational Readiness for Change: HIV Services in Correctional Settings

by
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BIOGRAPHY

A New York native, Melanie Riester was born and raised near Syracuse, NY. She graduated with her bachelor's degree in psychology from Siena College in Loudonville, NY in 2008. While at Siena College, Melanie spent a semester abroad at James Cook University in Townsville, Queensland, Australia. Continuing her education, Melanie earned her Master's in Social Work from the State University of New York at Albany in 2010. After graduation, Melanie worked as a clinical counselor in the drug abuse treatment and recovery field. Inspired to learn about research in human service settings, Melanie moved to North Carolina in 2013 to pursue a PhD in Public Administration. Her current research interests include change management, program evaluation, and nonprofit organizations. Melanie has worked on research projects with topics including: drug abuse and HIV services in correctional settings, perceptions of GMO foods, and homeless populations. In addition, she has assisted in collecting data for several books projects. Currently, Melanie is a Graduate Industrial Trainee at SAS Institute in Cary, NC.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ORGANIZATIONAL READINESS FOR CHANGE: HIV SERVICES IN CORRECTIONAL SETTINGS

CHAPTER ONE

INTRODUCTION

This research study investigated the factors that have a positive or negative effect on perceived organizational readiness to implement innovative HIV services in a correctional setting. Using ordinary least squares regression, this research found that goal clarity, technology, training value, employee experience, correctional setting (secured vs. community), and bi-directional communication are the most important predictors of perceived organizational readiness for change.

The following chapter serves to introduce the topic of this dissertation - organizational readiness for change in correctional settings - as well as the problem to be investigated and its significance. The chapter also provides background information on evidence-based programs and practices, HIV services in prisons, as well as an overview of the theory and methods used in this study.

Statement of the Problem

Evidenced based programs have become the "gold standard" within government-funded agencies, such as correctional settings, because they offer a credible measure of success. Programs and practices are defined as evidence-based if they have been rigorously evaluated scientifically, produce positive results that are attributed to the program (as they

should have positive results across a variety of settings), and the study conducted was peer reviewed (Substance Abuse and Mental Health Services Administration, 2016). Many of these evidence-based programs and practices are federally endorsed due to their effectiveness and use as an accountability measure; however, the organizational level of readiness to implement a new program can vary across settings. This study focused on perceived organizational readiness for change in correctional settings, a unique implementation setting for many reasons. Correctional settings often suffer from a lack of communication, cohesion, trust, and tolerance for change, making changes even more difficult to implement (Lehman, Greener, & Flynn, 2012). In addition, correctional settings must balance the personal health concerns of residents with security for the general public, where security takes precedent (Lehman, Greener, & Flynn, 2012). For example, a routine therapeutic treatment may be delayed due to a prison lockdown. This type of barrier to implementation is even more important when considering services such as HIV treatment. It is estimated that nearly 70% of inmates are in need of treatment programs in prison, such as HIV medication and/or counseling, but only a quarter of inmates actually receive services (Lehman, Greener, & Flynn, 2012). Because of this unique setting, there are several barriers to implementation that must be considered: poor assessment of needed services, unqualified staff, high stress levels, and low cohesion besides the balancing of security and therapeutic concerns (Lehman, Greener, & Flynn, 2012).

When considering the difficulty of receiving services in a correctional setting, implementing a new program or changing current protocols becomes an even greater task. More research is needed on the influences of implementation in health services settings, such

as corrections (Visher, et al., 2015). This current study focuses on perceived organizational readiness for change in implementing improved HIV services within a correctional setting. While successful implementation of evidence-based programs and practices is important within a correctional setting, organizational readiness is considered the first step towards implementation effectiveness (Weiner, 2009). Organizational Readiness is defined as the "organizational members' shared resolve to implement a change (change commitment) and shared belief in their collective capability to do so (change efficacy)" (Weiner, 2009, p. 1). In general, as well as within a correctional setting, organizational readiness is important when implementing a program because research has shown that there is a correlation between the level of implementation and outcomes leading to higher levels of program and participant success (Abbott et al. 1998, Durlak & DuPre, 2008). In addition, this research attempts to understand the differences in organizational readiness between different types of correctional settings - such as jails and prisons, vs. community settings - such as probation offices.

In examining HIV service implementation in correctional settings, this research attempts to integrate concepts of organizational readiness and the interactive systems framework (ISF) for dissemination and implementation. The ISF was "created to help bridge research and practice by specifying the systems and processes required to support dissemination and implementation of evidence-based programs, processes, practices, and policies" (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012, p. 1), through examination of implementation systems. The organizational readiness for change theory attempts to understand a group's collective efforts to implement a change (Weiner, 2009). Currently, the ISF and organizational readiness have not been addressed together. This is

important because an organization needs to be both motivated and capable of implementing a new program (Scaccia, et al., 2015, p. 490). Consequently, this research asks: (1) What organizational characteristics lead to organizational readiness for change in correctional settings when preparing for a change? And (2) Does the type of correctional setting matter?

This research bridges the gap that Visher, Yang, Mitchell, Patterson, Swan, & Pankow (2015) have identified: there is little understanding of what specific factors influence implementation in correctional settings. Visher, et al. (2014) have identified that perceived acceptability, feasibility, and organizational support are important factors in implementing an evidence-based program in a correctional setting. These concepts identify the structural aspects or the capacity of the organization, based on employee perceptions, to implement a new evidence-based program. This study furthers Visher, et al.'s (2014) research by understanding organizational readiness through the motivational aspects of employees that can affect the implementation of an evidence-based program. This is important because employees can have the capacity to implement a change, but still lack the motivation to do so. This is even more relevant because employees are the common denominator across all workplace settings. The findings of this study are generalizable to other workplace settings that may have challenges in implementing evidence-based programs and practices because the proposed change does not align with their environmental needs.

This study looks at what factors influence perceived organizational readiness for change, by looking at concepts from the organizational readiness for change theory and the Interaction Systems Framework for Dissemination and Implementation. The factors hypothesized to effect perceived organizational readiness are goal clarity, an administrative

champion, technology, training, and bi-directional communication. These factors will be further explained in Chapter Two. Using data from the Criminal Justice Drug Abuse Treatment Studies' (CJ-DATS) 2010-2013 data set, this study attempted to better understand implementation strategies in substance abuse and HIV services in correctional settings. The correctional settings currently offer HIV services that include HIV prevention classes, HIV education classes, HIV testing, HIV medication, and HIV pre-release planning. These settings are anticipating a change after they implement a NIATx process improvement model to change/improve their services. Specifically, this research looks at the HIV Services and Treatment Implementation in Corrections (HIV-STIC) assessments, and analyzes the data through ordinary least squares.

Significance

Understanding the readiness of an organization to implement a change is extremely important, as stakeholders are increasingly interested in understanding how programs achieve good outcomes (Lewis, et al., 2012, p. 553). In a correctional setting, funding for HIV services come from government agencies, such as the Centers for Disease Control and Prevention. With federal funding comes federal accountability. In order to increase accountability, the U.S. Government Accountability Office has challenged agencies to use performance information, including evidence-based programs and practices (United States Government Accountability Office, 2015). Funders, administrators, and other stakeholders want to encourage wide use of programs that are known to be successful (Lewis, et al., 2012, p. 554), and there may be differences between implementation results in controlled environments vs. community settings (Breitenstein, Gross, Garvey, Hill, Fogg, & Resnick,

2010; Bell et al., 2004; Elliott & Mihalic, 2004). However, in order to assess program implementation effectiveness, we must understand the readiness of an organization to implement this change.

It is important to understand organizational readiness to implement programs in a real-world setting. Does the setting or context matter? Doing so allows researchers to understand the validity of an intervention, the consistency of an intervention, as well as understand implementation in many different settings (Breitenstein, et al., 2010). It is important to know if a program failed due to the setting, or some other implementation procedure (Proctor, et al., 2011). This helps researchers understand why a program doesn't work, whether it is due to changes made during implementation, and helps to understand whether or not a program is even feasible for a particular setting (Dusenbury, Brannigan, Falco, & Hansen, 2003). Researchers can learn from organizational readiness, even when a program is implemented incorrectly or considered unsuccessful.

Most importantly, translating science into practice is important because evidence-based programs and practices have a real effect on lives. This study provides usable knowledge. When prevention interventions are not translatable to real life, it can negatively affect the health of families and communities (Spoth & Greenberg, 2011). Therefore, it is important that evidence based practices are implemented properly so that societal level changes can be made. If implementation fails, we may come to false conclusions regarding how effective an intervention is (Breitenstein, et al., 2010). Understanding organizational readiness is important because unready organizations will potentially have failures of implementation. This is extremely true when we are examining the implementation of

evidence-based practices for severe and chronic health conditions like HIV, where many lives will suffer when these services are not implemented properly. Simply, greater levels of readiness lead to better implementation outcomes, and greater implementation levels should theoretically lead to better program outcomes and societal gains (Weiner, 2009). It should be noted that current research does not make any assumption on the meaning of programs that are successful without proper implementation.

Background

In order to discuss organizational readiness for change within a correctional setting, it is important to discuss the relevant background information of these settings, including federal funding requirements, evidence-based programs and practices, and HIV services.

Policy diffusion. Most HIV services in correctional settings are dictated by federal policy and funding. Within government settings, change tends to happen incrementally, but can happen through sudden innovation (Berry & Berry, 2014). According to innovation and diffusion models, there are two explanations for program changes within the government: internal determinants and diffusion (Berry & Berry, 2014). Internal determinants include political, economic, or social characteristics that are internal to an organization and contribute to a new innovation (Berry & Berry, 2014). For example, a new innovation may be implemented to help with budgetary issues. Diffusion, on the other hand, explains policy innovation through "government adoptions of policies as emulations of previous adoptions by other governments" (Berry & Berry, 2014, p. 308). Essentially, one government will adopt an innovation because other organizations are, often in a coercive manner. Using an organizational lens, an organization can be coerced to adopt a new program if a higher

authority increases the organization's incentive to adopt a program, or forces them to adopt (Berry & Berry, 2014). For example, the government can tell an organization to adopt a program to continue receiving funding. This is often the case when an organization is federally or state funded, as is the case in correctional settings. Because the CDC funds state, local, and territorial health departments that provide services in correctional settings, the CDC HIV services are implemented (National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2012).

Government Performance and Results Act. Another factor behind the implementation of changes/new innovations in correctional settings is the Government Performance and Results Act (GPRA), which mandates the use of performance data and evidence-based programs and practices. The Government Performance and Results Modernization Act of 2010 establishes the use of strategic planning with long term goals and objectives, performance planning, and performance planning in federal agencies (Substance Abuse and Mental Health Services Administration, 2015). Originally enacted in 1993, this updated act includes the use of collaboration between agencies and improving outcomes of federally funded programs (Substance Abuse and Mental Health Services Administration, 2015).

A specific program of GPRA 2010 is to evaluate research conducted by the Agency for Healthcare Research and Quality (AHRQ), which evaluates current health care programs, customer satisfaction, and future activities (U.S. Department of Health and Human Services, 2016). The AHRQ provides evidence-based reports, which help organizations improve quality of healthcare by providing scientific information on medical conditions and strategies

(U.S. Department of Health and Human Services, 2016). Research by AHRQ, as well as other scientific agencies has noted the importance of evidence-based programs and practices within healthcare and related settings.

Evidence-based programs and practices. Many federally funded organizations are required to use evidence-based programs and practices. Evidence-based care is a well-known term in the medical field; however, it has more recently been incorporated into other relevant fields of human services. By medical definition, evidence based practice is making decisions about patient care based on evidence from systematic research (Sackett, Rosenberg, Gray, Haynes, & Richardson, 1996). Even more than making decisions about patient care, the patient's needs and values are included in the care. Not only are decisions made based on evidence from systematic research, but on the patient's current situation, goals, values and wishes and the expertise of the program facilitator or clinician (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). This allows decisions to be made with and about the patient and their care. By incorporating patient values, it also allows for assessment of how realistically a certain evidence-based practice can be implemented in real world settings. It is important to note that evidence-based programs and practices for a correctional setting may not include the values of patients/inmates, as they may not be seen as legitimate.

While this type of program and practice is revered, only approximately half of state and local public health programs use evidenced-based programs and practices due to several barriers: access to sources, lack of technical support, and no support system to sustain the program or practice (Escoffery, Carvalho, & Kegler, 2012).

The Centers for Disease Control and Prevention (CDC) has identified the growing importance of evidence-based programs and practices, while also acknowledging the debate around the definition of "evidence-based" throughout the literature in different fields (Centers for Disease Control and Prevention, 2016). The CDC defines evidence-based decision-making as bringing a "high standard of research evidence into the decision-making process while taking into account the contextual and experiential factors that influence decisions" (Centers for Disease Control and Prevention, 2016). They not only emphasize rigorous research practices, but also the experiences of many stakeholders and the environments that impact successful prevention and implementation (Centers for Disease Control and Prevention, 2016).

The Substance Abuse and Mental Health Services Administration (SAMHSA) defines evidence-based programs and practices as "specific techniques and intervention models that have shown to have positive effects on outcomes through rigorous evaluations (Substance Abuse and Mental Health Services Administration, 2016). An initiative of SAMHSA is The National Registry of Evidence-based Programs and Practices, which catalogues evidence-based behavioral health practices. In order to be included in this catalogue of programs, it must meet four criteria: rigorous study methodology, proper effect size, program fidelity, and have a conceptual framework that includes program goals, program components, and a theory of change. (Substance Abuse and Mental Health Services Administration, 2016).

From a practitioner perspective, evidence-based practice is a process that happens while engaging with the client. This process includes assessing the patient for a clinical

problem, asking a question about the clinical problem that can be answered through an appropriate search of the literature, comparing the literature to the client's problem, and evaluating progress (Duke University Medical Center Library, Health Sciences Library at the University of North Carolina at Chapel Hill, 2014). This process is in coordination with using evidence-based programs and practices and the client's values.

The programs or types of care defined as "evidence-based" are considered to be the best available and most effective. Due to budgetary constraints and government reorganization, many government funders are requiring specific evidence-based programs, practices, and innovations to be used with government funds. For example, more than $24 billion have been dispersed between Health and Human Services (HHS), Housing and Urban Development, Justice, Veterans Affairs (VA), and Defense to address the HIV crisis in the United States, which includes funds to support evidence based programs and practices (AIDS.gov, 2016). Even more so, the Office of Management and Budget's 2014 budget shows an increased emphasis on evidence-based initiatives in federal programs (Brodowski, et al., 2013).

Why is there such a push for evidence-based programs and practices? Funders support the idea of evidence-based programs and practices because they have been well accepted as being efficient, effective, and producing results (Brodowski, et al., 2013). Evidence-based programs and practices are encouraged, as there is an assumption that these programs are most effective and will not be a waste of funds. With federal dollars, the CDC has made significant strides to end HIV through the use of evidence-based programs and practices within populations that are at the highest risk, including reducing the rate of

infections by two thirds (Centers for Disease Control and Prevention, 2015). However, regardless of federal directives, a gap still exists between the mandate for evidence-based programs/practices and implementation (Brodowski, et al., 2013, p. 141). This is demonstrated in the education field, where only 3.5% of prevention programs in schools were implemented with fidelity, or as prescribed (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012). This is an extremely low percentage. Therefore, many programs must look at their implementation procedures to understand any gaps that may exist. Are organizations not ready for this type of change?

Many agencies have turned to the implementation sciences, and frameworks such as the interactive systems framework for dissemination and implementation, to understand where gaps in implementation may exist. Implementation frameworks address the real-world issues and gaps that exist from theoretical creation to a real-world setting (Brodowski et al.,2013). Many researchers agree that if this gap is not closed, evidence-based programs and practices that are extremely effective will not be used, or even worse, programs that are unknowingly not as effective as others will continue to be used (Lesesne, et al., 2008, p. 390). Unfortunately, little rigorous research has been conducted specifically on evidence-based clinical services, such as case management/planning in correctional settings (Shafer, Prendergast, Melnick, Stein, & Welsh, 2014). However, the Centers for Disease Control and Prevention have funded several pilot studies that investigate pre-release HIV intervention for young men, HIV interventions among women in state correctional facilities, an HIV intervention program for African American girls age 13-17 in a juvenile detention center, and

a counseling program for African American males in jail regarding high-risk sexual behavior (National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2015).

While the preferred method, the use of evidence-based programs and practices has advantages and disadvantages. The advantages include a higher chance of positive program outcomes, an appropriate use of limited resources, proven effectiveness of the program helps to support future funding, and it allows for future cost-benefit analysis information to be obtained (Cooney, Huser, Small, & O'Connor, 2007). Implementing evidence-based programs and practices has some costs, which include obtaining the materials to adopt and implement the program, as well as finding an evidence-based program suited to a particular agency or problem (Cooney, Huser, Small, & O'Connor, 2007). However, these costs are not large enough to deter all organizations from choosing evidence-based programs and practices known to be successful.

HIV prevention and treatment. When researching improved HIV services in a correctional setting, it is important to understand what HIV is and what services are being offered before the change. Because there is no vaccination to prevent HIV transmission, individuals must take certain precautions to prevent transmission of this virus, such as not sharing hypodermic needles, using contraception, and getting tested for sexually transmitted diseases regularly (National Institute of Allergy and Infectious Diseases, 2015). Currently, the National Institute of Allergy and Infectious Diseases (2009) is conducting research to assess the feasibility of new HIV treatment and prevention products, such as preventive antiretrovirals, topical gels/creams, and a vaccine.

If an individual suspects they have been infected with HIV, they should seek testing by a blood test to detect HIV antibodies or HIV genetic material if the infection occurred less than three months ago (National Institute of Allergy and Infectious Diseases, 2015). However, many people are tested yearly because HIV symtoms do not appear quickly and may be transmitted without knowing one is infected (National Institute of Allergy and Infectious Diseases, 2015). Many people are tested during routine medical examinations, such as a yearly physical, which allows healthcare providers to educate their patients regarding HIV prevention and transmission. HIV education is important because of the 1.1 million individuals infected with HIV, 21% do not know they are infected (National Institute of Allergy and Infectious Diseases, 2015).

When an individual is infected with HIV, the virus attacks the CD4+ T cells in the immune system, making it difficult to fight off illness and infection (AIDSinfo, 2015). Once an individual is infected with HIV, the only treatment consists of a medicinal treatment called antiretrovirals. Currently there are thirty-one approved antiretroviral pills, which are used to suppress the virus within the body (National Institute of Allergy and Infectious Diseases, 2015). This does not eliminate the virus from the body, but allows the individual to live a longer and healthier life. However, the virus is still transmissible, even if the individual is on proper medication (National Institute of Allergy and Infectious Diseases, 2015). The purpose of antiretrovirals is to prevent the HIV cells from multiplying and allows the immune system to recover (AIDSinfo, 2015). Without this medication, an individual who is infected will not be able to maintain a proper quality of life and will possibly only live a few years past infection (National Institute of Allergy and Infectious Diseases, 2015). When all

the CD4+ T cells in the body have been destroyed, the HIV infection develops into AIDS. When an individual progresses into the final stage of the disease, they are no longer able to fight off illness and infection, resulting in death.

HIV continuum of care services. HIV services are considered to be on a continuum, from prevention to community services. The continuum of care (CoC) model is heavily studied in the healthcare field, and is increasingly being used in other areas of human services and public health. The CoC model uses collaboration among agencies to improve a certain condition or population. According to Wood and Grey (1991), collaboration is defined as autonomous individuals engaged in the process to act on a particular issue (Tweit, 2014, p. 7). The continuum of care model for HIV was launched in 2013, with the goal of achieving "the greatest possible reductions in HIV infections by making sure that resources go to the regions, populations and prevention strategies where they will have the greatest impact" (National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, 2014), through a specified set of steps. Because HIV is an ongoing illness, agencies must work together for the betterment of this population, inside and outside of correctional settings. Essentially, collaboration attempts to meet the client's needs effectively, without denying or duplicating services (Tweit, 2014). Continuums of care are a collaborative effort that helps to sustain long-term initiatives (Berry-James, 2012). They help individuals within the continuum to understand the roles of each person in the system, initiating bi-directional communication.

The specific services that are offered as part of the HIV continuum of care includes HIV testing, prevention/education programs, and procedures to link infected individuals to

community based treatment after they have served their sentence (Centers for Disease Control and Prevention, 2015). The National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (2014) describes four steps as pivotal to the HIV continuum of care: (1) diagnosing the HIV infection, (2) being linked to some type of healthcare provider, maintaining HIV services, (3) being prescribed an antiviral, and (4) being considered virally suppressed, or having a very low amount of virus in the blood.

HIV services in prison. A prison is a unique setting for implementing a change because there are different concerns and challenges. A correctional setting must be concerned with security as well as treatment concerns, discipline for inappropriate inmate behavior that may not be conducive to treatment services, rural prisons having less qualified staff, and employee resistance to clients in a secured facility (Lehman, Greener, & Flynn, 2012). A prison is not considered an environment where change is natural or easy; which can seriously impact the implementation of a change (Lehman, Greener, & Flynn, 2012). Even more so, settings such as prisons or jails have a difficult time implementing changes due to a lack of communication, cohesion, trust, and intolerance for changes (Lehman, Greener, & Flynn, 2012, p. 98).

According to the Bureau of Justice Statistics (2010) and the Centers for Disease Control and Prevention (2010), inmates with HIV/AIDS constitute 1.5% of the total prison population, which is approximately 30 times the total population of infection (Maruschak, 2012; Visher, et al., 2014). Because inmates are at high risk for HIV infection, the rate of HIV in correctional facilities is 2-4 times higher than the general infected population (Pearson, et al., 2014). Due to this problem in correctional facilities, the CDC has instituted

practice guidelines for how to implement HIV services in a correctional setting (Pearson, et al., 2014). However, the real problem lies in the fact that even though HIV services are offered in correctional settings, there are many gaps in these services (Pearson, et al., 2014, p. 2385), which continues even when inmates receive correctional supervision in the community. Gaps exist in HIV services in correctional settings via awareness/testing, prevention and education programs, and inmate linkages to community services (Visher, et al., 2014). Because of the need for HIV services and the gaps that exist in providing them, it is very important that we understand the specific barriers to implementation of a change and how to address them. Is organizational readiness one of these barriers?

Based on data and research provided by the New Mexico AIDS Education and Training Center at the University of New Mexico Health Sciences Center and the International Association of Providers of AIDS Care, approximately 20,449 people with HIV in state and federal prisons are in need of health care services, but do not receive the level of care that they require or need (The AIDS InfoNet, 2014). Even more so, "medical care in a prison or jail depends on the local facility" and "prisoners do not receive health care that meets public health standards" (The AIDS InfoNet, 2014). Similar to the general public, many individuals in the correctional system are not aware they have HIV and do not receive testing. Only twenty-four states require testing at entry to incarceration, and problems with confidentiality are evident once inmates are tested (The AIDS InfoNet, 2014; AVERT, 2015). Fortunately, the increase of HIV therapy in prisons has reduced AIDS related deaths in correctional settings since 1995 (The AIDS InfoNet, 2014).

The basic goals of HIV treatment in correctional settings is the same as other settings: reduce the amount of virus in the body, maintain a proper immune system, improve quality of life, and reduce HIV/AIDS deaths in prison (The AIDS InfoNet, 2014). However, due to the correctional environment, many inmates have circumstances that make HIV treatment more difficult to administer. Some of these circumstances include access to prior treatment records, resistance to certain medications, high-risk behaviors such as intravenous drug use and shared tattoo needles, length of prison/jail term, sexual assault by other inmates and guards, and storage of medication (The AIDS InfoNet, 2014; AVERT, 2015).

Program Delivery. When an individual enters the correctional setting, they will be assessed for HIV services, usually voluntary. The screening process includes three steps (Berry-James, 2007):

(1). The individual is assessed for eligibility for HIV services.

(2). A needs assessment is conducted by a case manager to understand if the individual has tested positive for HIV, has full blown AIDS, or is at high risk for HIV.

(3). The case manager assigns the individual to the needed services.

Once the participants are accepted into the HIV program, the intake process begins. This process includes five steps (Berry-James, 2007):

(1). Information about the HIV services offered within the correctional setting.

(2). Participants are assessed and a treatment plan is created.

(3). Paricipant needs are prioritized.

(4). Participants are referred for futher medical testing.

(5). Participants are referred to any relevant community services and/or prison health services, including case management, medical services, and health eduation/risk reduction services.

In general, there are five main HIV services offered to individuals while in correctional settings, depending on the quality of services in the setting. These services include: HIV testing and follow up counseling, HIV treatment, HIV education, harm reduction activities, and free condoms (AVERT, 2015). Some of the harm reduction activities that may be offered in correctional settings include needle and syringes and opiod treatment (AVERT, 2015). In addition, when transitioning out of a correctional setting, it is very important for the individual to receive an HIV treatment referral to continue their current treatment (The AIDS InfoNet, 2014). The correctional settings studied in this research project do not utilize counseling or harm reduction services.

The HIV services model that is used within the correctional settings in this study follows the Centers for Disease Control and Prevention model/guidance. They offer education and prevention classes, testing, and pre-release planning. These servives are addressed in inmate feedback surveys. Table 1 below depicts the average frequency and length of sessions for clients receving services within the correctional settings to be studied.

Table 1. Frequency & Length of Sessions

Type of Service	Sessions Offered	Average Number of Sessions/Client	Minutes per Session
HIV Education Classes	Only as needed	No average	120 minutes
HIV Prevention Classes	Only as needed	No average	120 minutes
HIV Testing	Only as requested	---	---
HIV Treatment (medication)	Only as needed/daily	Daily	---
HIV Pre-Release Planning	Only as needed	---	50 minutes

Study population. The secondary data for this study is from the Criminal Justice Drug Abuse Treatment Studies, a group of studies based on multiple correctional-based settings (jail, prison, probation, etc.) where the research focus was on implementation strategies and evidence-based treatment programs for individuals with substance use disorders and HIV. More specifically, the CJ-DATS 2 studies' aim was to determine the effectiveness of implementation strategies around collaborative substance abuse and HIV treatment in correctional settings. By increasing collaboration in criminal justice settings, benefits to public health and public safety are likely to be a reality (Friedmann, et al., 2013, p. 1).

NIATx model. The intervention implemented in the CJ-DATS2 study within the correctional settings is called the Network for the Improvement of Addiction Treatment (NIATx, 2015), and comes from the substance abuse field. The NIATx model "trains coaches to help local agency change teams learn how to try out and assess new organizational processes for targeted improvements" (Pearson, et al., 2014, p. 2385). Although this

assessment model was created for the addictions field, it was modified for HIV services. The NIATx model was used to assess the implementation of the HIV continuum of care model within each correctional setting, and to assess the need for improved services. While this model was not developed for HIV services, the model was able to improve HIV services in a correctional setting (Pearson, et al., 2014).

The NIATx Process Improvement Model is "a model of process improvement specifically for behavioral healthcare settings to improve access to and retention in treatment" (CHESS/NIATx, 2016). This change model has 4 steps: (1) Complete a walk through to understand customer needs, (2) Decide what you want to accomplish, (3) Select and test changes, and (4) Sustain the gains (CHESS/NIATx, 2016). See Figure 1. NIATx Process Model below.

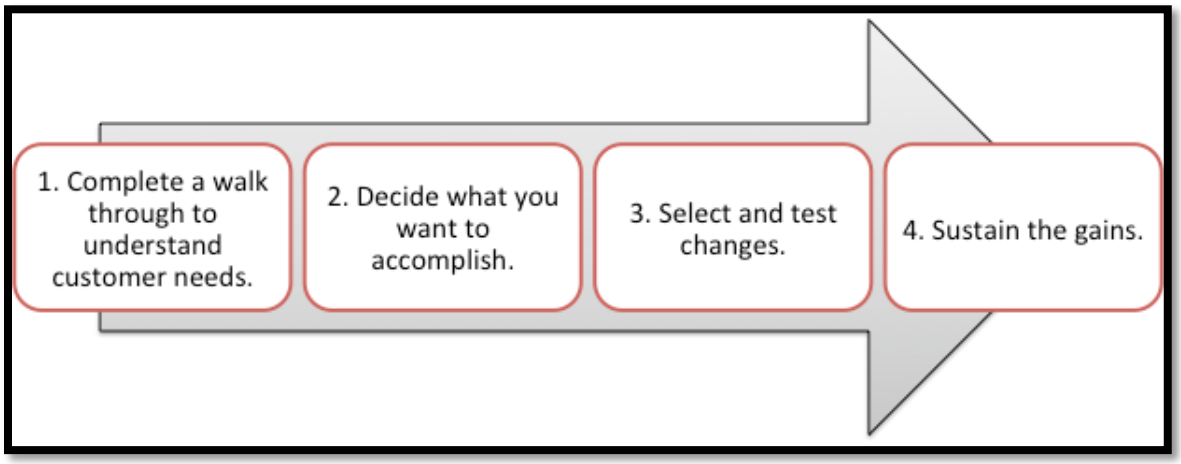

Figure 1. NIATx Process Model (CHESS/NIATx, 2016)

This study will investigate the perceived organizational readiness of correctional settings to implement the changes identified during the NIATx process improvement model.

Research sites in the experimental group used the NIATx process model to assess the HIV continuum of care services by creating a local change team under the direction of a NIATx facilitator (Visher, et al., 2014). Under the NIATx model experimental condition, the change team completed several activities aimed at improving the continuum of care services. The control group, however, used an assessment method of their choosing to make improvements to the HIV continuum of care services. Because the control settings were about to form their own assessment method, there were a variety of methods used. Both conditions received training on HIV services, which included information on HIV infection, services within the continuum, and web-based resources (Visher, et al., 2014). In this study, perceived organizational readiness will be assessed through baseline data only, as this study is interested in readiness for change for the improved services after the NIATx process model. This study does not look at the effects of the NIATx model on the continuum of care, only the readiness to make the changes associated with improving HIV services.

HIV-STIC. The portion of the CJ-DATS 2 study that is used in this study is called the HIV Services and Treatment Implementation in Corrections, which aims to assess implementation strategies that look at HIV/AIDS education, testing, and treatment. The HIV-STIC study consisted of 14 cluster-randomized trials, where there was an experimental and a control condition. The experimental condition received training in the evidence-based HIV services and personal coaching/support using a HIV modified NIATx model, while the control conditions only receiving HIV training. The correctional settings were recruited by

the 9 research centers and the experimental and control groups were paired for similarity. Administrators and other employees who have direct involvement with the management and delivery of HIV services were asked to complete the study measures. This study will utilize the baseline data from the HIV-STIC assessment only.

This Study

In using data from the National Criminal Justice Drug Abuse Treatment Studies, this research attempts to understand the factors that have a positive or negative effect on perceived organizational readiness to implement new/improved HIV services in a correctional setting. Implementing a program with fidelity is crucial, however, an organization's readiness must be assessed first. This study will attempt to understand how goal clarity, an administrative champion, technology, training, and bi-directional communication affects the perceived organizational readiness within the correctional setting, ultimately affecting program and societal outcomes. Even more so, this study will attempt to understand the differences between perceptions of readiness based on secured vs. community correctional settings.

Looking forward, Chapter 2: Literature Review will provide a brief overview of the literature on implementation and community sciences, as well as an extensive review of organizational readiness literature. It will introduce the reader to the theoretical background guiding this study, as well the predictors of organizational readiness. Finally, this chapter will discuss the hypotheses of this study. Chapter 3: Methods will cover the methods and statistical analyses used in this study. The Methods chapter will outline variable

operationalizations, as well as the research design, sample, data, and instrumentation. It will also discuss how the data will be statistically analyzed.

CHAPTER TWO

LITERATURE REVIEW

This chapter provides an overview of the literature on implementation and community sciences based on illustrative studies pertinent to my investigation, as well as an extensive review of the predictors associated with organizational readiness. First, this chapter provides a brief introduction of the implementation field, including the interactive systems framework for dissemination and implementation, a framework used for understanding implementation. Next, this chapter provides an extensive literature review on organizational readiness for change theory, the theory guiding the hypotheses in this paper. Both of these literature reviews include studies on correctional settings. Resulting from this literature review, this chapter identifies the most important predictors of organizational readiness.

Interactive Systems Framework for Dissemination and Implementation.

The implementation and community sciences study the dissemination and implementation of evidence-based programs and practices. Implementation research attempts to understand how evidenced based programs and practices are put into routine practice (Eccles & Mittman, 2006, p. 1). Essentially, implementation science attempts to find better ways to disseminate information from researchers to practitioners, in a way that it can be realistically implemented (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012). By definition, dissemination is the distribution of materials and information to an organization or population for use, while implementation is the use, adoption, and integration of dissemination materials into an organization or population (National Institute of Health,

2013; Leeman, Jilcott-Pitts, & Myers, 2014). While the implementation sciences focus on the process from disseminating an evidenced-based program or practice to the actual implementation of the program; the process of dissemination to implementation is not always smooth or quick. For example, it takes approximately 17 years for just 14% of dissemination materials to reach the implementation stage (Bala, 1998). Because this can be a long process, it is important that any evidence-based programs and practices that are disseminated and implemented properly for maximum benefits, which includes understanding how ready an organization is for the implementation.

The implementation and communities sciences is a broad category of study, including the work of Pressman & Wildavsky (1984) and the Narrative Policy Framework (Mcbeth, Jones, & Shanahan, 2014). However, this study will focus on the interactive systems framework (ISF) for dissemination and implementation (Wandersman et al., 2008). Specifically, Wandersman (2003) sought to find a better way to understand and support the manner in which programs are disseminated and implemented (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012). Recognizing that there is a need for more collaboration between the dissemination and implementation of programs, the Centers for Disease Control and Prevention, the University of South Carolina, and Miami University put together a three year planning project to better understand the process (Wandersman et al., 2008; Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012). This three-year project resulted in the creation of the interactive systems framework (ISF) for dissemination and implementation, a framework used to understand the systems in which dissemination and implementation take place. While the systems are understood, the causal pathways between each system have not

been empirically tested (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012). Regardless, this framework helps us to not only be aware of how a program is implemented within a setting, but also the entire process in which a program is disseminated and implemented. See Figure 2 below for a depiction of the ISF framework and its systems.

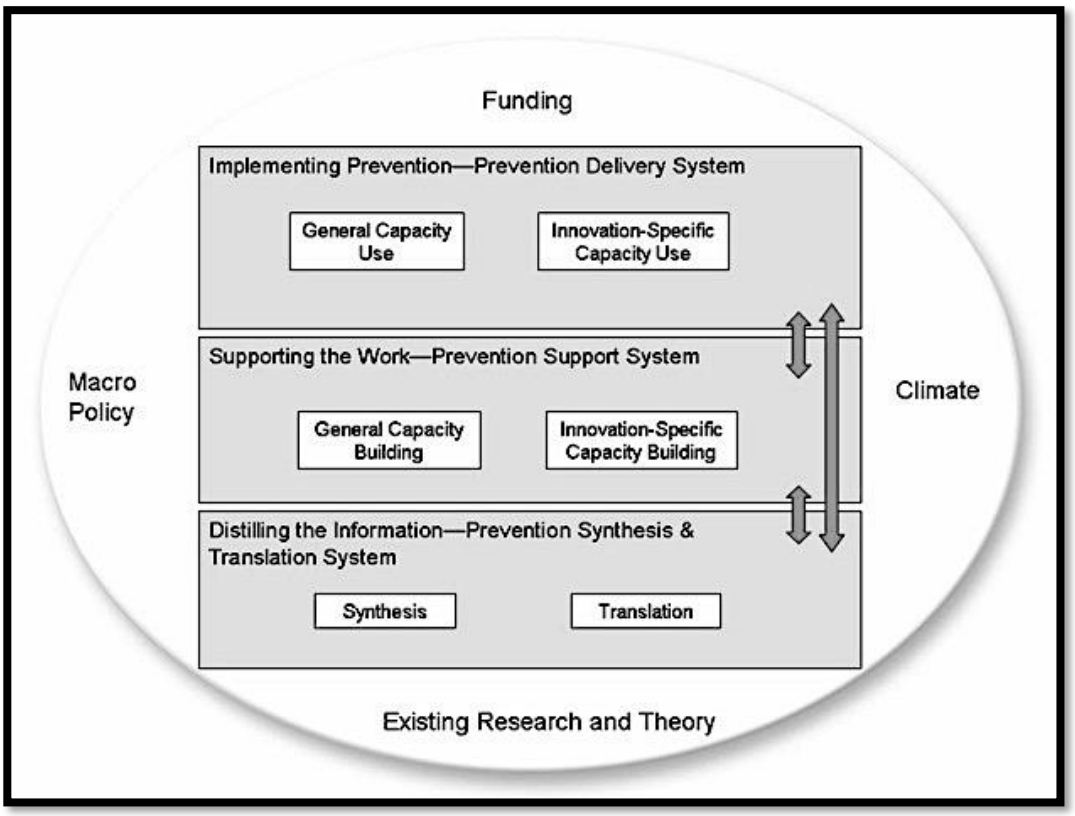

Figure 2. Interactive Systems Framework for Dissemination and Implementation (Wandersman et al., 2008)

According to Wandersman et al. (2008), "The Interactive Systems Framework for Dissemination and Implementation (ISF) advances the dialogue on the transfer of prevention knowledge because it shifts the focus away from specific activities and toward ‘‘the

infrastructure or systems'' that are needed to carry out prevention activities in a community" (Firesheets, Francis, Barnum, & Rolf, 2012, p. 173). Instead of focusing on specific activities, this framework uses a systems perspective using three specific systems: the prevention synthesis and translation system, the prevention support system, and the prevention delivery system.

Prevention synthesis and translation system. The ISF framework focuses on three specific systems that are considered in the dissemination and implementation process: the prevention synthesis and translation system, the prevention support system, and prevention delivery system. Each of these systems looks at a specific part of the process. The Prevention Synthesis and Translation System is "conceptualized as distilling information about innovations and preparing them for implementation by end users" (Wandersman, et al., 2008, p. 174). This system is responsible for distilling information and research to be used by those who would implement the practices.

Prevention support system. The Prevention Support System is "conceptualized as supporting the work of those who will put the innovations into practice" (Wandersman, et al., 2008, p. 174). This system supports the organizations that actually implement what is disseminated from the Prevention Synthesis and Translation System. Essentially, "A major role of the prevention support system within the ISF is to help build the capacity of the prevention delivery system, though it can also help the prevention synthesis and translation system better understand the prevention delivery system" (Duffy, et al., 2012, p. 371). Current research within this system has focused on implementation of a program itself, as well as the interaction between the Support System and the Delivery System (Flaspohler,

Lesesne, Puddy, Smith, & Wandersman, 2012, pp. 4-5). Prevention support includes the training a prevention delivery system would get to implement a change.

Prevention delivery system. The third system, the Prevention Delivery System, has the primary function of "implementation of innovations (e.g., delivery of programs) in the field" (Wandersman, et al., 2008, p. 174). This system actually implements the information and programs that are disseminated. Current research within this system has looked at "increasing our understanding of how to conceptualize, measure, and build characteristics that influence implementation and dissemination that might be applicable across many interventions" (Flaspohler, Lesesne, Puddy, Smith, & Wandersman, 2012, p. 4).

Interaction of systems. Theoretically, "these systems should optimally work together for successful dissemination and implementation of prevention innovations" (Wandersman, et al., 2008, p. 178). However, the interaction of these systems has not been widely studied. The majority of research has looked at the systems individually. Therefore, according to Wandersman et al. (2008), "The amount of interaction currently taking place between the systems is not known…While these interactions were not the primary focus of the development of the interactive systems framework, it may be that the greatest contribution to enhancing dissemination and implementation may lie in these interactions" (p. 179). In reality, all of these systems are needed for proper implementation. For example, "Expecting front line…practitioners to regularly comb through the most relevant…research and data, and then interpret and apply what they learn to their daily work is unrealistic. Demanding schedules and tight budgets make this type of activity a luxury for many. Furthermore, some community-based practitioners are simply not interested or trained to engage in this activity"

(Rolleri, Wilson, Paluzzi, & Sedivy, 2008, p. 233). Therefore, we need all three systems interacting for proper implementation. According to Flaspohler, Lesesne, Puddy, Smith, & Wandersman (2012), no studies have "truly reflected the dynamic interaction of the Delivery System through the Support System to inform the Synthesis and Translation system" (p. 6). Therefore, it would be beneficial for researchers to focus on the communication between these systems.

Organizational Readiness For Change.

This literature review has discussed the implementation of a change, but before a program can be implemented, the organization must be ready. When an organization is looking to implement or improve a program, readiness for the program is critical (Scaccia, Cook, Lamont, Wandersman, Castellow, & Katz, 2015). If the organization is not prepared for a change, the implementation may not be successful. In addition, understanding an organization's readiness for change is extremely important if we wish to understand any gaps from dissemination to implementation in real world setting (Scaccia, et al., 2015). If the organization is not ready, the intervention strategies may be implemented in a way that is not consistent with the protocol.

What is meant by organizational readiness? According to Scaccia, Cook, Lamont, Wandersman, Castellow, & Katz (2015), organizational readiness involves the motivation to implement a program, and the capacity in which to implement it. How are each of these elements defined? Motivation is defined "as perceived incentives and disincentives that contribute to the desirability to use an innovation" (Scaccia, et al., 2015, p. 486). When looking at motivation for implementation, the incentives need to outweigh the disincentives.

The second aspect of organizational readiness, capacity, can be divided into two kinds. First, general capacities are organizational elements, such as staffing, that allow the organization to function (Wandersman et al., 2008; Scaccia, Cook, Lamont, Wandersman, Castellow, & Katz, 2015). Second, innovation specific capacities "are the human, technical, and fiscal conditions that are important for successfully implementing a *particular* innovation with quality" (Scaccia, Cook, Lamont, Wandersman, Castellow, & Katz, 2015). This type of capacity looks at whether or not an organization is able to handle a specific program.

More specifically, the organizational readiness for change theory, developed by Weiner (2009) is a systems thinking theory that attempts to understand the collective efforts of individuals who believe in the capability and the need for the change. While this theory could be adapted for the individual or societal level, this study will be considering readiness at the organizational level by looking at the collective readiness of the agency as a whole. According to Weiner (2009), this theory is used when trying to understand how the collective behavior of an organization leads to organizational readiness, theoretically leading to an effective implementation. See Figure 3 for the theoretical model. Organizational readiness theory includes two main concepts: change commitment and change efficiency. Change commitment is defined as the employees shared commitment to engage in the actions needed to make the implementation (Weiner, 2009), and this theory asserts that motivation to implement the change is an important factor. When employees are committed, it leads to change efficiency. Change efficiency is defined as the employees shared belief that they have the capabilities to engage in the activities needed to make the implementation (Weiner,

2009). This theory asserts that in addition to motivation, organizational members must also feel they have the capability to implement the change.

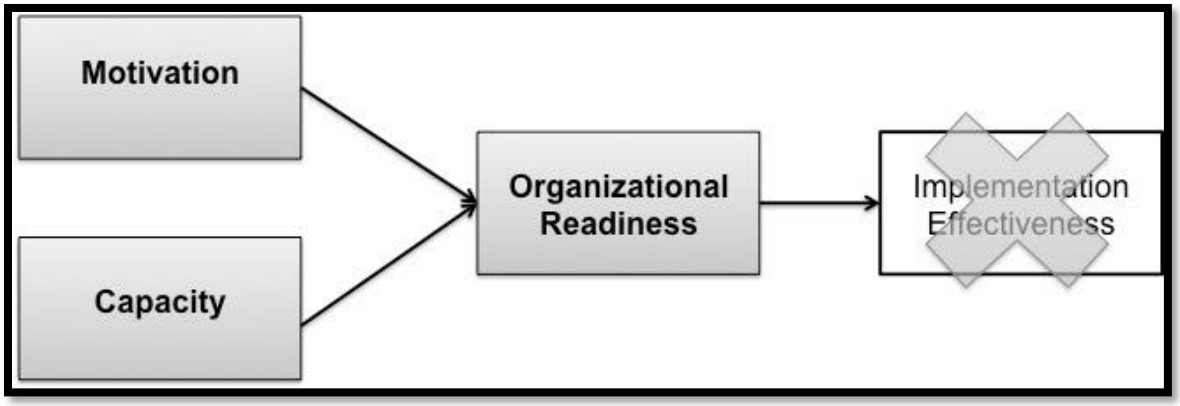

Figure 3. Organizational Readiness for Change Model (Weiner, 2009)

Change efficiency looks at how individuals in the organization assess the capacity of the organization to implement the change based on the task demands, resource availability, and situational factors of the organization (Weiner, 2009). For example, do members know how to implement the change, do they have the resources to do so, and how does the current situation of the agency affect implementation? This tenet asserts that employees who share a similar (and positive) view of their capabilities to implement a change will share a sense of confidence that it can be done (Weiner, 2009). An organization is "ready" when the members can agree that they are prepared to make this change due to their assessment of the task demands, resource availability, and situational factors they face within the organization. The concept of change efficiency will also be defined in more detail in the predictors of organizational readiness section.

Why do we care about organizational readiness? Organizational readiness is important because greater levels of readiness lead to better implementation outcomes (Weiner, 2009). Greater implementation levels should theoretically lead to better program outcomes and societal gains. See Figure 4 below.

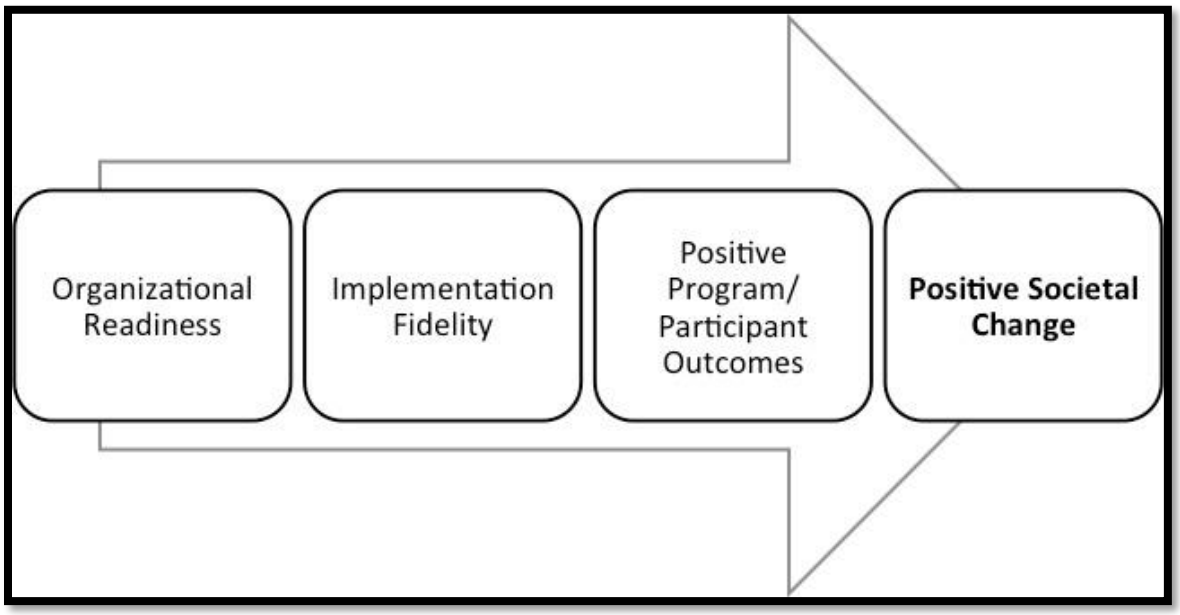

Figure 4. Outcomes Chain (Weiner, 2009)

In addition, when discussion of implementation is linked to outcomes, it creates a connection between organizational readiness and implementation research (Weiner, 2009). Therefore, including organizational readiness into the interactive systems framework is very important to understand implementation. According to Weiner (2009), in order to test organizational readiness concepts, a research design that includes multiple organizations with a common

change is needed. Therefore, HIV services throughout prisons and community settings in the United States is an appropriate setting to be looked at through an organizational readiness lens because the continuum of care model allows HIV services to (theoretically) be implemented in common or comparable ways. When an organization is considered to be "ready" to implement a new program, based on their motivation and capacity to do so, Weiner (2009) asserts that program implementation will be effective.

It should be noted that there is more than one theory of organizational change. Previous studies of organizational change have utilized Lehman et al.'s (2012) organizational readiness for change theory, which focuses on preparation for change within an organization, with a "consideration of program needs and resources, structural and functional characteristics, and general readiness to embrace change (Simpson, 2009). This theory tends to focus on the structural aspects of change; however, this study will utilize Weiner's (2009) organizational readiness for change theory, which considers the capacity of the agency to make a change, as well as the motivation to do so. An organization can have the capacity to make a change, but not the motivation, and vice versa.

Incorporating the ISF with organizational readiness concepts. In examining the literature, it is important that an organization possess the organizational readiness elements of motivation and capacity to properly implement a new or improved program. "An organization may have the capacity to implement a specific innovation, but not the motivation to put it into practice. Until now, the interactive systems framework has not explicitly addressed motivation and organizational readiness; consequently, we propose this critical addition to the ISF. To be ready, an organization needs to be both willing (motivated)

and able (capacity) to put an innovation into place" (Scaccia, et al., 2015, p. 490). Therefore, this study will attempt to incorporate elements of the interactive systems framework into the organizational readiness theory concepts.

Organizational readiness as response variable. This research will attempt to understand the relationship between organizational factors and perceived organizational readiness to implement improved HIV services in a correctional setting. While successful implementation of evidence-based practices is important, organizational readiness is considered the first step towards implementation effectiveness (Weiner, 2009). Organizational Readiness is defined as the "organizational members' shared resolve to implement a change (change commitment) and shared belief in their collective capability to do so (change efficacy)" (Weiner, 2009, p. 1). Specifically, this theory looks at how employees shared motivation and capacity for implementation leads to readiness for change. Theoretically, if organizational readiness for change is high, then effective implementation should increase. See the Figure 5 below for a visual depiction of the theory.

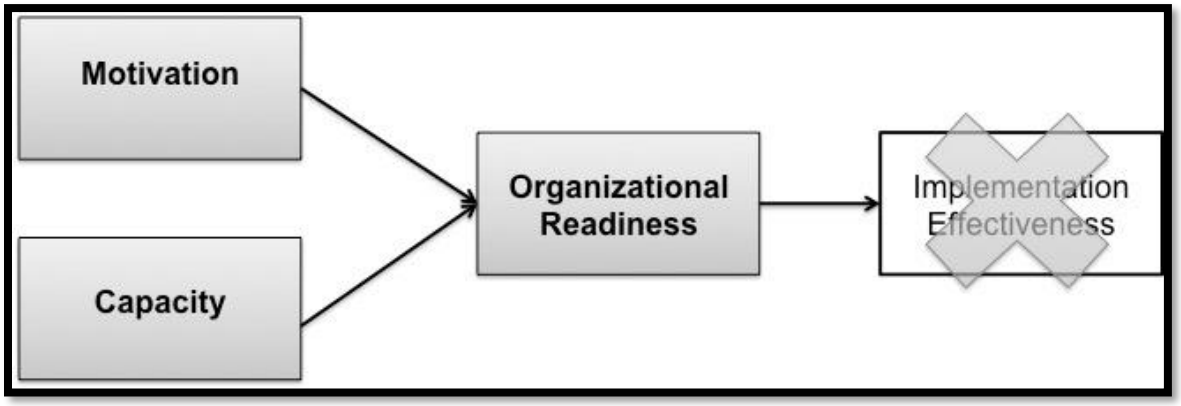

Figure 5. Organizational Readiness for Change Model (Weiner, 2009)

Implementation studies in correctional settings. Several studies have been funded by the Centers for Disease Control and Prevention that assess the implementation of HIV services within correctional settings. Taxman, Henderson, Young, & Farrell (2014) studied the impact of training on assessment and case planning strategies on organizational readiness in juvenile justice offices. The researchers found that external coaching that targeted the social climate of the organization and staff knowledge/skills led to higher organizational readiness (Taxman, Henderson, Young, & Farrell, 2014). Wolitski (2006) assessed Project START, a multi-session release intervention for males age 18-29. The researchers found that this intervention led to lower rates of risky sexual behavior after prison release (Wolitski, 2006). Fasula, Fogel, Gelaude, Carry, Gaiter, & Parker (2013) looked at the implementation of an evidence-based HIV/STI intervention for female inmates. This study was used to encourage the adaptation, adoption, and use of evidence-based programs and practices for underserved populations (Fasula, et al., 2013).

Predictors of organizational readiness. Through an extensive literature review, several predictors have been selected to understand organizational readiness for change in a correctional setting. The predictors that will be used in this study include concepts of organizational readiness for change theory such as goal clarity, an administrative champion, and technology, and ISF concepts such as training and bi-directional communication. This section is organized by listing the hypothesis and its relevant literature. All hypotheses will be controlling for other effects in the model.

H1. Goal clarity will relate positively to perceived organizational readiness.

Goal clarity. A key concept of organizational readiness for change theory is motivation. The following studies will look at how motivation effects perceived organizational readiness, where motivation is defined by how motivated individuals are to implement a change, as evidenced by how much they value it (Weiner, 2009). Using an organizational readiness perspective, Jennett et al. (2005) looked at the implementation of "Telehealth" in rural communities. Utilizing four semi-structured telephone interviews conducted with key informants with considerable experience in rural telehealth programs, they attempted to understand different types of readiness within an organization, such as core readiness, engagement, structural engagement, and nonreadiness (Jennett et al., 2005). The researchers found that motivational concepts such as engagement, core readiness, and nonreadiness all have an effect on implementation. Engagement in the change involves how the employees view the change and whether or not they are ready for it (Jennett, et al., 2005). In addition, dissatisfaction with the status quo and willingness to implement the change and the core readiness of individuals in the agency, has a positive effect on implementation (Jennett, et al., 2005). Even more so, the nonreadiness of an organization and its members, or the "perceived lack of need or a failure to recognize a need for change" has a negative effect on implementation (Jennett, et al., 2005, p. 143).

Motivation has also been examined in school settings. According to Flaspohler, Meehan, Maras, & Keller (2012), evidence based practices continue to grow, but implementation is a very complicated process. One reason for this complexity is the idea of a

broadly disseminated program within a school that has very specific issues. The idea of evidence-based programs and practices has been met with skepticism as they have been shown to be effective, but not when disseminated in a broad sense (Flaspohler, Meehan, Maras, & Keller, 2012). Therefore, evidence-based programs and practices have the potential to be extremely effective, but have minimal results in comparison to the specific needs of each school setting. How can this problem be solved? One way is for employees to be an active part of the process in identifying needs and barriers of that particular setting (Flaspohler, Meehan, Maras, & Keller, 2012). However, it has been found that this type of collaboration does not happen, and current practices to support implementation have not produced positive outcomes as expected (Flaspohler, Meehan, Maras, & Keller, 2012). Therefore, it is extremely important to understand if motivational aspects of readiness are relevant in a correctional setting.

When implementing or improving a program, not all employees have the same motivation. Some may be motivated to implement the program for the benefit of its recipients, while others may be concerned with their own objectives. According to Bohte & Meier (2000), when employees implement new programs, they may focus on their needs and barriers in the implementation over the intent of the program. This may cause employees to cut corners or engage in goal displacement. Goal displacement happens when new goals are created over the original goals (Bohte & Meier, 2000). Goal displacement can happen when employees are tasked with a heavy caseload and may only implement parts of the program that they feel are most important and doable.

While goal displacement has extensively been researched in relation to organizational readiness, goal clarity has been studied less. Sawyer (1992) defined goal clarity as how well the objectives of a certain task or program are well defined and stated clearly. Therefore, how is perceived organizational readiness affected if employees don't have shared understanding of the goals of the program? Goal clarity within an organization implementing a new program is important because when organizational and program goals are clear, management has a greater sense of what is important and how to achieve it (Moynihan, Pandey, & Wright, 2011). Anderson & West (1996) defined team goal clarity as "'how clearly defined, shared, attainable, and valued are the team's objectives and vision' " (as cited in Peralta, Lopes, Gilson, Lourenco, & Leonor, 2015, p. 59).

Bandura (1989) cited that specific goals help employees understand the effort necessary to complete the task (Jung, 2012). In studying employee turnover, Jung (2012) found that when goals are ambiguous, it leads to less employee motivation and lower employee performance. Even more so, Jung (2013) found that setting clear organizational goals increased job satisfaction among employees. Overall, "Organizational goals establish a vision of a desired future state, which, in turn, provides both a rationale for the organization's existence", and consequently influence employee attitudes regarding the goals (Wright, Moynihan, & Pandey, 2012, p. 208). Understanding the need for a program is a main concept behind motivation in ORC.

Weber & Weber (2001) attempted to understand how organizational characteristics (including goal clarity) affect trust in management, perceptions of supervisory support, and perceptions of organizational readiness, before and after a purposed change at a fire

department. The study found that between data point 1 and data point 2, “goal clarity was the only significant moderator of perceptions of organizational readiness” (Weber & Weber, 2001, p. 295). As goal clarity increased, perceptions of organizational readiness increased. This study will look at how organizational goal clarity affects organizational readiness for change.

H2. An administrative champion will relate positively to perceived organizational readiness.

Administrative champion. In examining drug abuse treatment, Fuller et al. (2007) looked at the organizational readiness of 249 treatment units in the National Drug Abuse Treatment Clinical Trials Network. Using HLM, they attempted to understand how motivation for change, institutional resources, staff attributes, and organizational climate affect the support of evidence-based treatment within the treatment units. Their results indicated that motivation is key for change, and that willingness and ability to influence peers had a positive effect on the use of treatment manuals, mental health services, and motivational incentives (Fuller, et al., 2007, p. 188). Motivational research shows that the employees are influential in motivating other employees of an organization to implement a program properly. However, what is unclear is the ways in which administration motivates employees. Using ORC concept of motivation, this study will attempt to see if an administrative champion has a positive effect on perceived organizational readiness.

H3. Technology (inadequate) will negatively relate to perceived organizational readiness.

Capacity/Technology. Organizational readiness for change theory defines capacity as the collective agreement that the organizational members are capable of implementing a change based on task demands, resource availability, and situation factors (Weiner, 2009). When considering the task demands, organizational members consider if they have information needed to implement the change (Weiner, 2009). When considering resource availability, organizational members consider if they have the resources to implement the change, which include human, financial, material, and informational resources (Weiner, 2009). And finally, when considering situational factors, the organizational members will consider whether or not the current climate of the organization will have an effect on the implementation of the change (Weiner, 2009).

Lee & Cheung (2004) used a multiple case study design to study the effect of organizational readiness, perceived benefits, and environmental factors on the adoption of innovations, such as internet retailing. The researchers found that when the level of organizational readiness is high, the level of implementation is high (Lee & Cheung, 2004). They also cited environmental factors as having an effect on innovation implementation. For example, when market competition is low, innovation implementation tends to be higher (Lee & Cheung, 2004, p. 396). In addition, when the company is one of the few who have implemented this program, implementation tends to be higher (Lee & Cheung, 2004, p. 396). The researchers also hypothesized that greater perceived benefits to the organization would

increase innovation implementation, however, benefits were not the same for every organization (Lee & Cheung, 2004). Therefore, perceived benefits may not be generalizable to all organizations, as they perceive benefits differently.

In looking at implementation of "Telehealth" in rural communities through a qualitative phenomenological approach, Jennett et al. (2005) found that a certain amount of structural readiness was needed for individuals to feel confident in making a change (Jennett, et al., 2005). Structural readiness included capacity building activities such training, proper funding, and technical readiness. Technical readiness is defined as "an individual's perception of the stability and preparedness of structures and technologies" (Jennett, et al., 2005). The authors found that respondents wanted technology that was efficient, but also appropriate for the tasks they needed to complete (Jennett, et al., 2005). This study will quantitatively understand how the inadequate technology in an organization affects the perceived organizational readiness to implement changes in correctional settings. While capacity is defined as task demands, resource availability, and situation factors (Weiner, 2009), the data used for this research study did not provide the information to study all three facets. Therefore, this study utilizes the material resources – technology - to look at one facet of capacity.

H4. Organizational training will relate positively to perceived organizational readiness.

Training. Before implementing a new program, the interactive systems framework (ISF) suggests that training take place. Training, such as a workshop, is important because it

can increase competencies and provides a systematic way to implement a new program (Escoffery, Carvalho, & Kegler, 2012). In addition, training for an evidence-based program allows employees to understand where the program comes from, how to find the evidence to support its effectiveness, and how to receive assistance in implementing the program (Escoffery, Carvalho, & Kegler, 2012). It is difficult for programs to be properly implemented if employees are unsure of where to find assistance. Even more so, it is difficult for employees to be ready to implement a new or improved program without proper training.

In order to understand the usefulness of training before an implementation, Escoffery, Carvalho, & Kegler (2012), designed a pretest/posttest study, surveying participants at a training event in Georgia. The measurement tool showed that the greatest benefits to participants were the ability to understand the implementation process, locate resources, and being able to discuss barriers during each stage of implementation (Escoffery, Carvalho, & Kegler, 2012). Even more so, 94.7% of participants reported that the training was helpful and relevant (Escoffery, Carvalho, & Kegler, 2012), causing prevention researchers to see training as important for program integrity and successful implementation of programs (Dusenbury, Brannigan, Falco, & Hansen, 2003). Therefore, providing some training on new or improved programs should lead to more successful program implementation, as the employees have opportunities to understand the process and discuss barriers. Unfortunately, there have been no follow up studies as to whether or not this training actually improved implementation.

In a study looking to assess the organizational readiness of correctional and community substance abuse program, Lehman, Greener, & Flynn (2012) found that

correctional counselors reported less resources and more organizational climate barriers, as compared to community settings. This study identified that many counselors indicated the need for more guidance in using evidence-based programs and practices, support for making changes in organizational climate, and more training on procedures and new responsibilities (Lehman, Greener, & Flynn, 2012). This study will attempt to further understand the effect of training on the perceived organizational readiness to implement improved services in correctional settings.

H5. Bi-directional communication between correctional settings will relate positively to perceived organizational readiness.

Bi-Directional communication. Looking at implementation from an ISF lens, communication is a predictor of organizational readiness. Often, communication is uni-directional when implementing evidence-based programs, practices, or initiatives. Because of this uni-dimensionality, programs are often developed from the view of a researcher, and not of a practitioner (Leeman, Jilcott-Pitts, & Myers, 2014). This uni-directionality can cause several problems, including practices that are irrelevant to the environment the program will be implemented in, little guidance on how to implement programs, and programs that are not relevant to the practitioner's motivations (Leeman, Jilcott-Pitts, & Myers, 2014, p. 261). More recently, the idea that implementing evidence-based programs and practices will be more successful if there is communication and interaction between researchers and practitioners has been acknowledge and supported (Leeman, Jilcott-Pitts, & Myers, 2014).

There are two main benefits to bi-directional communication. First, practitioner needs are taken into account (Leeman, Jilcott-Pitts, & Myers, 2014). This allows practitioners to have their concerns considered. Second, bi-directional communication allows researchers to understand the barriers to implementation that practitioners may face in a real-world setting (Leeman, Jilcott-Pitts, & Myers, 2014). According to Brodowski, et al. (2013), "implementing evidence-based policy and programs requires a multilevel systems approach that engages funders and implementers at each level in active policy-to-practice feedback loops that support high-quality service delivery" (p. 141). In looking at substance abuse treatment for community-based corrections, Friedmann et al. (2013) found that inter-organizational ties led to greater access of medication assisted treatment services for those under supervision, also leading to less criminal activity.

The concept of bi-directional communication in the ISF has been used in looking at cardiac health initiatives, such as hypertension reduction. The ISF was used to understand how implementation systems interact to produce better outcomes (Lane, et al., 2012). The ISF has also been used in looking at substance abuse prevention, by examining each system's interaction with the others. According to Firesheets, Francis, Barnum, & Rolf (2012), bi-directional communication helps individuals in different roles to understand the unique needs of each member of the system. The ISF has also been used to look at the interaction of the roles of each implementation system, however information is needed regarding how the systems interact and what facilitates communication (Firesheets, Francis, Barnum, & Rolf, 2012).

The idea of bi-directional communication has also been studied in regards to collaboration. First, it has been examined by looking at domestic violence collaborative networks and the importance of their stakeholder relationships, specifically how the relationships will impact the effectiveness of collaboration. Nowell (2009) found that collaboratives are tasked with increasing coordination among organizations, as well as improving capacity of the networks. This research found that stakeholder relationships do not have the same impact on coordination as system change (Nowell, 2009, p. 209). Therefore, it is important to define what the purpose of the communication is, as stakeholder relationships can have a strong moderating effect on communication. Second, the importance of collaboration has been looked at in regards to juvenile justice and private prison services. According to Berry-James (2012), collaboration is very important among stakeholders, and is often pivotal in sustaining initiatives long term. This study will attempt to understand how communication between continuum of care members affects perceived organizational readiness in correctional settings.

Current Study

This research focuses on perceived organizational readiness for change in correctional settings. Current literature shows that there is a significant gap between program mandates and the fidelity of implementation of many federal programs (Brodowski, 2013). Are organizations not ready to implement? In using data from the Criminal Justice Drug Abuse Treatment Studies 2 (CJ-DATS 2) studies, this research attempts to understand what organizational factors influence perceived organizational readiness to implement services in a correctional setting. To do so, this study attempts to integrate organizational readiness theory

and interactive systems framework concepts, using data that aims to understand implementation strategies in correctional settings. Data will be analyzed using ordinary least squares.

Research questions.

(1) What organizational characteristics lead to organizational readiness for change in correctional settings when preparing for a change?

(2) Does the type of correctional setting matter? Does a controlled setting, such as a prison or jail, differ than a community setting, such as probation?

Hypotheses.

H1. Goal clarity relates positively to perceived organizational readiness for change.

H2. An administrative champion relates positively to perceived organizational readiness for change.

H3. Technology (inadequate) will negatively relate to perceived organizational readiness.

H4. Organizational training (value) relates positively to perceived organizational readiness for change

H5. Bi-directional communication between correctional settings relates positively to perceived organizational readiness for change.

See Table 2. below for a meta-analytic table of variable, literature, and related hypotheses.

Table 2. Variable, Literature, & Hypotheses

Variable	**Related Hypotheses**	**Related Literature**
Perceived Organizational Readiness		Hogue et al., 1996; Proctor, et al., 2011; Durlak & DuPre, 2008; Friedmann, et al., 2013; Pearson, et al., 2014; Shafer, Prendergast, Melnick, Stein, & Welsh, 2014; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Visher, et al., 2014; Lehman, Greener, & Flynn, 2012; Lehman, Greener, & Simpson, 2002
Goal Clarity (Motivation)	H1. Goal clarity will relate positively to perceived organizational readiness.	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004

Table 2. Continued

Administrative Champion (Motivation)	H2. An administrative champion will relate positively to perceived organizational readiness.	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004; Broome, Knight, Edwards, & Flynn, 2009; Funk, Champagne, Wiese, & Tornquist, 1991
Technology (Capacity)	H3. Technology (inadequate) will negatively relate to perceived organizational readiness.	Weiner, 2009; Jennett et al., 2005; Hailey & Balogun, 2002; Lee & Cheung, 2004
Training	H4. Organizational training (value) will relate positively to perceived organizational readiness.	Escoffery, Carvalho, & Kegler, 2012; Dusenbury, Brannigan, Falco, & Hansen, 2003; Lehman, Greener, & Flynn, 2012
Bi-Directional Communication	Bi-directional communication between correctional settings will relate positively to perceived organizational readiness	Leeman, Jilcott-Pitts, & Myers, 2014; Brodowski, et al., 2013; Friedmann et al., 2013; Lane, et al., 2012; Firesheets, Francis, Barnum, & Rolf, 2012; Nowell, 2009; Berry-James, 2012; Dedrick & Greenbaum, 2011

Other Variables. There are several organizational readiness for change predictor variables discussed in the literature that are not used in this study. These variables include

varied motivational reasons to value a change (personal, organizational), resources for the change (time, finances, people), and the climate surrounding the change (Weiner, 2009). There are also several interactive systems framework for dissemination and implementation predictor variables discussed in the literature that are not used in this study. These variables include individual needs and barriers to implementation, the environment in which the implementation or change takes place (climate, funding, policy, related research), fidelity vs. adaptation of an implementation, and implementer/change agent characteristics (Wandersman, et al., 2008). Without these variables, we may not get a full picture of what affects organizational change for readiness in a correctional setting, leading to omitted variable bias. For example, there may be funding or policy issues that affect the organizational readiness of a correctional program that is not considered, skewing results in the study. While these variables are important, the secondary data of this study did not provide that information.

Search Methodology. The literature review for this study was methodologically collected. A methodological literature review is important because it provides a system to find all of the relevant literature on the current topic. Based on the research topic and explanatory theories, search terms were established. The search terms were entered into bibliographic databases such as Summon and Google Scholar to search for literature. Because a search reveals a large number of articles, each article must be evaluated. Articles were evaluated based on the relevancy of the topic, importance of the author in the relevant field, and the year the article was published. Each search was limited to peer reviewed articles. See Appendix F. Bibliographic Search for a detailed search record.

CHAPTER THREE

METHODS

This chapter provides an overview of the methods and statistical analysis used to test the theory and hypotheses proposed. First, this chapter connects the theoretical concepts discussed in the literature review with the proposed methods, including how variables will be operationalized. The chapter begins with a brief description of the study, then the secondary data used for this study is described. The setting in which the data are collected, the population studied, the sampling methods used to choose participants, and instrumentation are discussed.

Next, the chapter describes the operationalization of the dependent variable, including rationale for treating it as a continuous variable and the method chosen to define perceived organizational readiness. The chapter continues by defining each independent variable's validated scale/index and the control variables. Finally, the chapter describes the Categorical Principal Components Analysis used.

Lastly, this chapter outlines the statistical analysis plan for testing the research questions and hypotheses proposed. It begins by describing how the data was cleaned for analysis and provides descriptive statistics of the cleaned data. The chapter also describes the rationale and process for analysis techniques, including assumptions and output. Finally, this chapter discusses the limitations of this study.

Conceptualizing Organizational Readiness.

Organizational readiness is an important antecedent to effective implementation (Weiner, 2009). This study looks at the organizational factors that have an effect on perceived organizational readiness within a correctional setting. Specifically, this study asks: (1) What type of organizational characteristics lead to readiness for change? And (2) Does the type of correctional setting matter? Past research on organizational readiness has indicated several constructs that can predict organizational readiness. These constructs include motivation and capacity within the organization, training value, and bi-directional communication (Wandersman, et al., 2008; Weiner, 2009). This study will: (1) investigate motivational concepts such as goal clarity and an administrative champion on perceived organizational readiness; (2) capacity concepts such as technology on perceived organizational readiness; (3) training on perceived organizational readiness; and (4) bi-directional communication on perceived organizational readiness. See Figure 6 below for visual depiction of the conceptual model.

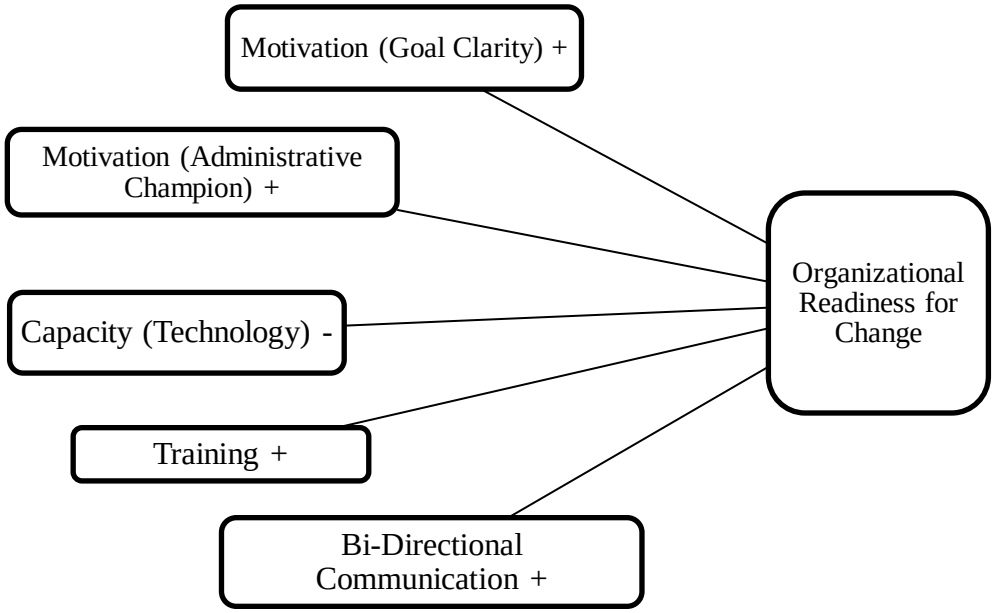

Figure 6. Conceptual Model

In order to answer the research questions, this study intended to use linear mixed modeling for analysis. This type of analysis was thought to be appropriate because this study attempts to understand the relationship between several independent variables on a continuous dependent variable, while using nested data. However, the intra-class correlation coefficient was not significant and ordinary least squares was used for analysis. Data for this study consist of 205 individual level responses nested within 37 correctional settings.

Data Source

The data used for this study was collected as part of the Criminal Justice Drug Abuse Treatment Studies 2 (CJ-DATS 2) funded by the United States Department of Health and Human Services and the National Institutes of Health. The CJ-DATS 2 was a survey

conducted to look at implementation research in criminal justice settings. The goal of the CJ-DATS 2 study was to "identify implementation strategies that maximize the likelihood of sustained delivery of evidence-based practices to improve offender drug abuse and HIV outcomes, and to decrease their risk of incarceration" (Inter-university Consortium for Political and Social Research, 2011). The CJ-DATS 2 included several separate studies. The current study utilizes the HIV Services Treatment Implementation in Corrections (HIV-STIC) data.

Setting. The secondary data for this study was collected in prisons, jails, and other correctional institutions throughout the United States from 2010-2013, where HIV services were provided. The CJ-DATS 2 study consisted of two groups, an experimental group and a control group. The experimental group received external coaching on the NIATx process as well as training in the fundamentals of HIV prevention and intervention. The control group only received training on the fundamentals of HIV prevention and intervention. The two groups were surveyed twice, baseline and post training. This study uses the baseline data only because the pre and post data measures the effects of a NIATx model on services. The NIATx model was used to improve the HIV services within the correctional settings. This study is only interested in the readiness of the organization to implement the changes suggested from the NIATx process model, not the program improvements from it.

Population. The correctional settings chosen for the CJ-DATS 2 studies were a purposive sample and not random. The CJ-DATS 2 study included 9 research centers across the United States that recruited the correctional facilities. The correctional facilities were located in New England, the Mid-Atlantic, East North Central, East South Central, Mountain,

Pacific, and an Offshore Commonwealth of the United States. The facilities consisted of jails, work release centers, state correctional facilities, community health providers, detention facilities, prisons, and community HIV providers. The unit of analysis for this study is at the individual level, as treatment staff, treatment directors, correctional staff, and correctional directors were surveyed. In addition, administrators and other employees who have direct involvement with the management and delivery of HIV services were asked to complete the study measures. The data were aggregated by setting for group level analysis.

Sampling

The CJ-DATS 2 study utilized a CONSORT diagram, a multi-level sampling plan to guide the selection of research sites and the staff (administrators and staff responsible for implementing HIV services) nested within each site. Control and experimental groups were then paired based on state, county, size, and security level. There were 385 baseline cases. However, 205 surveys are considered valid with listwise deletion, after multiple imputation. Aggregated, there are 37 survey sites.

Instrumentation

This study utilized the "HIV Merged Surveys" dataset from the CJ-DATS 2 studies, which consists of several questionnaires merged into one single dataset. While these surveys were collected at the individual level, they are aggregated and analyzed by setting. The merged surveys consist of one baseline and post-test surveys. This study utilizes the baseline data only. This study utilized the Baseline Survey of Organizational Characteristics Scale (BSOC), which consists of 60+ survey items on a 5-point Likert scale investigating each setting characteristics. The second survey utilized is the HIV Staff Survey (HIV).

Research Design

The research design for this study is a non-equivalent groups design. This design was chosen because random assignment was not used when the secondary data was collected. The survey unit of analysis for this study is at the individual level, but is aggregated at the organizational level for analysis. Each row of the dataset is at the individual level, but all individuals in the same correctional setting will have the same value on the correctional setting level. The information gained from this study is not relevant to just the settings studied, but all similar settings. Evidence-based programs and practices are used in many federally funded programs, making it mandatory that certain programs be used, regardless of setting or circumstance. Because every setting is different, it is important to figure out how to best implement the evidence-based programs and practices across settings. This research attempts to understand how the employees in an organization assess the organizational readiness to implement changes within their workplaces. The common denominator across all workplace settings is its employees. However, a number of questions arise here. As the literature has noted, there is a gap between program mandates and implementation fidelity across all evidence-based programs and settings. Is this due to employee readiness? Are the employees the reason that evidence-based programs and practices have such low implementation rates? Are they motivated, but lack the capacity? Do they have all the tools, but lack the motivation for a change? Correctional settings are a relevant place to begin this inquiry, as they are a setting where change is an unwelcome concept. The next section will discuss variable operationalization.

This study asks: (1) What type of organizational characteristics lead to readiness for change? And (2) Does the type of correctional setting matter? To explore these questions, this study includes five independent variables (goal clarity, administrative champion, technology, training value, bi-directional communication) and one dependent variable (See the conceptual model below).

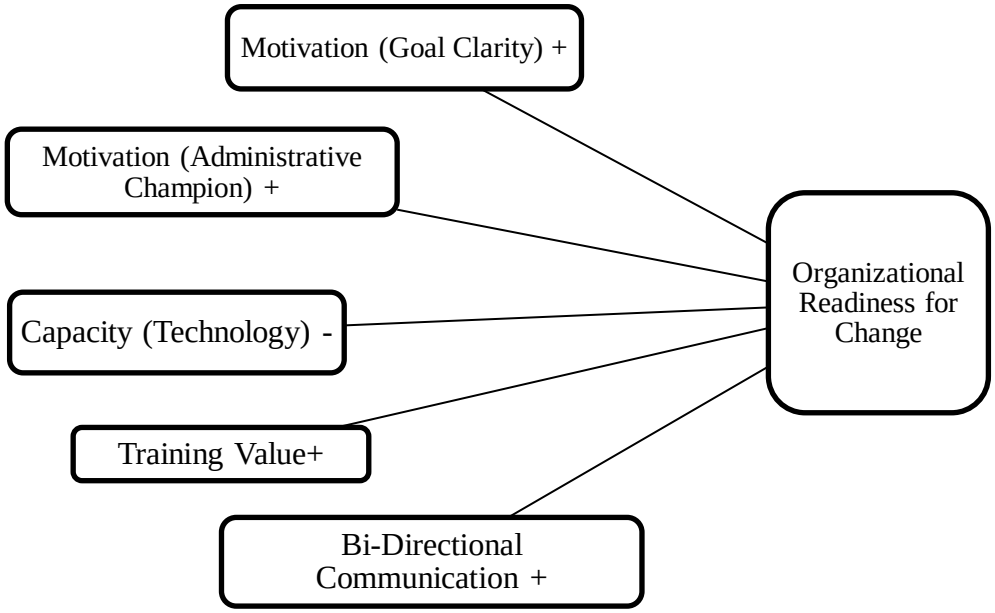

Figure 7. Conceptual Model

The DV in this study is perceived organizational readiness, which is measured by several survey items combined in an index to assess how an employee perceives organizational readiness, justifying its treatment as a continuous variable. The next paragraph will discuss the strengths and limitations of treating ordinal data as continuous.

Treating ordinal data as continuous. According to Norman (2010), it is a common myth that ordinal data cannot be used with parametric analysis techniques; however, it is untrue because the statistics are still robust in light of assumption violations. According to Rhemtulla, Brosseau-Liard, & Savalei (2012), treating a categorical variable as continuous is appropriate when it has 7 or more categories. The DV, perceived organizational readiness for change, has 21 levels, making it appropriate to be treated as continuous.

However, there is still much debate in the literature over whether or not ordinal data should be treated as continuous, even when they have as few as five levels. However, "many treat the scales as interval scales, assuming that each point on the Likert-type rating scale represents an equal distance or amount of the construct being measured" (Miller & Lovler, 2016, p. 115). Even more so, the more levels present in the ordinal variable, the less likely the model will be to pass the parallel lines test.

Individuals who question the error resulting from using ordinal variables as continuous are often referred to Pasta (2009), who states: "it is very rare for an ordinal variable to be an important predictor and have it not be important when considered as a continuous variable. That would mean that the linear component of the relationship is negligible but the non-linear component is substantial. It is easy to create artificial examples of this situation, but they are very, very rare in practice" (p. 3).

Another objection to treating ordinal variables as continuous is the distribution of interval vs. continuous. However, "Tabachnick and Fidell (2007) and other authors … have argued that it is more important to consider the distribution shapes for scores on quantitative variables (rather than their levels of measurement)" (Warner, 2013, p. 10). If there are 5 or

more levels of a variable, it tends to be treated as continuous, because when "variables are measured on an ordinal scale and there are relatively few categories, 2-4 categories, estimation methods specifically designed for categorical variables are recommended" (Newsom, 2015, p. 1).

Methods for measuring organizational readiness. The measurement of organizational readiness has conceptual and methodological concerns. When measuring organizational readiness for change, the instrument should include (1) a brief description of the change, (2) items that assess the collective readiness, (3) items that are relevant enough to the current organization but can also be used in other settings, and (4) items based on theory, not the particular program itself (Weiner, 2009). However, obtaining an instrument that contains these standards can be a difficult task. In a review of 106 peer reviewed articles and 43 organizational change instruments, Weiner et al. (2008) found two common problems. First, there was inconsistency in how organizational readiness was defined, as a psychological state or as a structural concept (Gagnon, et al., 2011). Second, many of these instruments had little validity or reliability, where only 7 instruments were validated as reliable and valid (Gagnon, et al., 2011).

The organizational readiness for change multi-dimensional measure developed by Greener, Joe, Simpson, Rowan-Szal, & Lehman (2007) and Lehman, Greener, & Simpson (2002), is a multi-dimensional measure used to measure organizational readiness for change. This measurement has 18 scales that assess four main areas of readiness: program needs/pressures for change, staff attributes, institutional resources, and organizational climate. The areas of program needs/pressures for change and staff attributes will be used to

measure the dependent variable in this study, as the developers have identified these areas for use in "assessing service needs and organizational readiness for implementation" (Lehman, Greener, & Flynn, 2012). To date, this measurement tool has been used with over 5,000 individuals in more than 650 organizations within several health care settings (Lehman, Greener, & Flynn, 2012).

The subscales composing the organizational readiness for change multi-dimensional measure have been assessed for reliability using Cronbach's Alpha. Of the 18 scales assessed, eleven scales had a score of .70 and higher, with the lowest score at .54. Each scale was also assessed for dimensionality through principal components analysis, where each scale was found to be uni-dimensional. See Table 3 below adapted from Lehman, Greener, & Simpson (2002). The table below does not depict the actual survey items from the multi-dimensional measure of organizational readiness, only the ORC dimensions measured.[1]

Table 3. Organizational Readiness for Change Psychometric Properties

	# of Items	Directors Alpha (n=135)	Staff Alpha (n=458)	Program Alpha (n=111)	Eigenvalues >1
Motivation for Change					
• Program needs for improvement	8	.80	.87	.84	4.11
• Immediate training needs	8	.84	.84	.88	4.08
• Pressures for change	7	.75	.70	.68	2.56, 1.21

[1] Table 5. Dependent Variable on page 65 displays the indexed survey items that show uni-dimensionality as organizational readiness for change in this study, "program needs for improvement".

Table 3. Continued.

Staff Attributes					
• Growth	5	.74	.62	.72	2.14, 1.17
• Efficacy	5	.66	.71	.68	2.34, 1.16
• Influence	6	.75	.79	.79	2.99
• Adaptability	4	.51	.66	.76	2.08

When assessing for construct validity, the measurement researchers found the measurement to be valid based on the "agreement between management and staff on several ORC dimensions, relationships between staff organizational climate dimensions and patient engagement in treatment, and associations of agency resources and climate with organizational stability" (Lehman, Greener, & Simpson, 2002, p. 197). Overall, the researchers found this multi-dimensional measure to be a reliable and valid tool to measure organizational readiness for change. The current study will perform a factor analysis to confirm that the seven scales identified by Lehman, Greener, & Simpson (2002) hold as a multi-dimensional measure of organizational readiness for this study. Now that the dependent variable has been defined, the measurement of the independent variables will be discussed.

Measurement of independent variables. The indexed items for measuring each independent variable and control variable in this study came from validated scales. The validated scales for the IVs and DV passed Cronbach's alpha criterion for reliability and uni-dimensionality criteria in past research studies. The reliability and eigenvalues from past factor analyses are displayed in Table 4 below. While these scores were validated by past

research, a factor analysis was run to confirm with current data. While the ordinal variables in this study are treated as continuous, Categorical Principal Components Analysis was performed due to the ordinal nature of the survey items.

Table 4. Variable Measures Summary

Variable Name	**Definition**	**Variable Type**	**Data Source (Reliability, Eigenvalue)**
Perceived Organizational Readiness	Index of factors that assess how an employee perceives organizational readiness to implement improved HIV services.	Dependent Variable	Scale: Program Need for Improvement (.84, 4.11)
Goal Clarity	Index of factors that determine the level of goal clarity.	Independent Variable	BSOC Scale: Mission (.75, 2.43)
Administrative Champion	Index of factors that determine whether or not administration serves as motivator to implement improved HIV services.	Independent Variable	BSOC Scale: Leadership (.90, -)
Technology	Index of factors that determine the adequacy of technology within the organization.	Independent Variable	BSOC Scale: Equipment (.66, 2.25)
Training Value	Index of factors that assess the value of employee training in an organization.	Independent Variable	BSOC Scale: Training (.64, 1.85)
Bi-Directional Communication	Index of factors that assess the communication between organizations in correctional settings.	Independent Variable	HSS Scales: Resources (.79, -), Development (.82, -), & Policy (.85, -)
Correctional Type	Nominal Variable: choice of 37 settings.	Control Variable	BSOC – demo item 16
Employee Experience	Number of years an individual has been working within their field.	Independent Variable	BSOC Demographic item

Table 4. Continued.

Correctional Setting	Dummy Variable: choice of correctional setting type (1 = secured, 0 = community)	Control Variable	BSOC – demo item 16
Years Working: Corrections/Treatment, Unit Program, Agency, Position	Ordinal Variable: Less than 5, 5 – 9.99, 10 – 19.99, 20 – 29.99 30 or more.	Control Variable	BSOC – demo items 9-12

*BSOC is the Baseline Standard of Organizational Characteristics Survey.
*HSS is the HIV Staff Survey.

Control variables. There are several factors controlled for in understanding perceived organizational readiness in correctional settings. This study includes control variables such as correctional setting, employee experience, correctional type, and years working in current agency/unit/position. Bivariate correlations will remove any variables that show multicollinearity.

Correctional Setting. This study attempts to compare secured vs. community correctional settings to understand if there could be different perceptions of organizational readiness between community and secured settings (Lehman, Greener, & Flynn, 2012). The basis of evidence based practice is that there is "one best way" when it comes to implementing a successful program. According to Guerra and Backer (2003), many policymakers have supported evidence-based programs and practices as a way to reduce programs that are not collaborative, and to require evidence-based programs and practices for funding. However, many communities have different and various needs, including the culture and environment of their agency and its constituents. Therefore, when developing studies that look at organizational readiness, the organizational environment of an agency must be considered.

A correctional facility could be considered a unique environment as compared to a community setting, and the factors that have an impact on implementation may be different (Visher, et al., 2015). According to Wandersman (2003), proper implementation is contingent on many problematic assumptions. In this study, the context of a correctional facility could be considered problematic for organizational readiness. According to Gregory Jr, et al. (2012), “it is only through adapting the presentation and being flexible in their use that they can fit effectively into existing organizational cultures and be accepted by those charged with implementing them" (p. 332). Therefore, we must remember that some settings may not be ready to implement programs as prescribed.

Employee Experience. Using a longitudinal single case study of private sector firms, Hailey & Balogun (2002) attempted to understand how contextual constraints and enablers (such as time, scope, preservation, diversity, capability, capacity, readiness for change, and power) have an effect on change implementation. The researchers found that capacity for change and the readiness for change had a positive influence on the implementation (Hailey & Balogun, 2002). Specifically, the researchers looked at the effect of time on the implementation, meaning the timeframe in which the implementation needed to take place (Hailey & Balogun, 2002). The aspect of time that is not accounted for is the experience of the individuals implementing the change. Is an employee with many years of experience in the field more ready to implement a new program than an employee with little experience in the field? Or is the opposite true?

According to Choi (2011), “Employees’ attitudes toward organizational change are largely attributed to the situational variables particular to a change initiative, and as a result,

may evolve over time as their experiences change" (p. 493). Therefore, an individual's readiness may be different according to how many experiences they have had with change over time. Abdinnour-Helm, Lengnick-Hall, & Lengnick-Hall (2003) found that employees with less experience have more positive attitudes regarding the capabilities, value, acceptance, and timing of the change. This is because "newer employees have not likely experienced previous management and IT initiatives, so they have not formed negative attitudes about their potential capabilities or value" (Abdinnour-Helm, Lengnick-Hall, & Lengnick-Hall, 2003). They found that experience has a negative impact on the perception of capability and value of organizational changes. However, there is another viewpoint that must be considered. Does having experience in making changes lead to more perceived organizational readiness?

Variable operationalizations. Based on the factor analysis performed, the final indexes used to measure the DV, IVs, and CVs in this study are displayed and listed in Table 5 Variable Operationalizations. The process used to extract these variables is described in detail in the next section.

Table 5. Variable Operationalizations

Variable	Related Hypotheses	Survey Item	Related Literature
Perceived Organizational Readiness		BSOC: Organization/unit help defining mission BSOC: Organization/unit help with goal setting BSOC: Organization/unit help assigning staff roles BSOC: Organization/unit help with job descriptions BSOC: Organization/unit help evaluating staff performance **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Hogue et al., 1996; Proctor, et al., 2011; Durlak & DuPre, 2008; Friedmann, et al., 2013; Pearson, et al., 2014; Shafer, Prendergast, Melnick, Stein, & Welsh, 2014; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Visher, et al., 2014; Lehman, Greener, & Flynn, 2012; Lehman, Greener, & Simpson, 2002
Goal Clarity	H1. Goal clarity will relate positively to perceived organizational readiness for change.	BSOC: Clear unit goals, objectives BSOC: Staff understand goals as part of corrections **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004

Table 5. Continued

Administrative Champion	H2. An administrative champion will relate positively to perceived organizational readiness for change.	BSOC: Inspire others with plans BSOC: Lead unit by example BSOC: Get people working together BSOC: Insist on best performance BSOC: Treat staff as individuals BSOC: Encourage new ways BSOC: Give special recognition BSOC: Define performance goals, objectives BSOC: Innovate before most other managers **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004; Broome, Knight, Edwards, & Flynn, 2009; Funk, Champagne, Wiese, & Tornquist, 1991
Technology	H3. Technology (inadequate) will negatively relate to perceived organizational readiness.	BSOC: Outdated equipment BSOC: Need more computers **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Hailey & Balogun, 2002; Lee & Cheung, 2004

Table 5. Continued

Training Value	H4. Organizational training (value) will relate positively to perceived organizational readiness for change.	BSOC: Training a priority BSOC: In-service trainings **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Escoffery, Carvalho, & Kegler, 2012; Dusenbury, Brannigan, Falco, & Hansen, 2003; Lehman, Greener, & Flynn, 2012
Bi-Directional Communication	H6. Bi-directional communication between correctional settings will relate positively to perceived organizational readiness for change.	HIV staff survey: Share funding HIV staff survey: Share facility space HIV staff survey: Share recordkeeping, management information systems HIV staff survey: Share program and services developing HIV staff survey: Share information about services HIV staff survey: Share case reviews HIV staff survey: Share informal agreements **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Leeman, Jilcott-Pitts, & Myers, 2014; Brodowski, et al., 2013; Friendmann et al., 2013; Lane, et al., 2012; Firesheets, Francis, Barnum, & Rolf, 2012; Nowell, 2009; Berry-James, 2012; Dedrick & Greenbaum, 2011
Employee Experience		How long have you been working in the substance abuse field as a counselor, therapist, or clinician/in the medical field/corrections field?	Weiner, 2009; Jennett et al., 2005; Hailey & Balogun, 2002; Lee & Cheung, 2004

Table 5. Continued

Correctional Setting		Secured, Community	Lehman, Greener, & Flynn, 2012; Guerra and Backer, 2003; Guerra & Knox, 2008; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Gregory Jr, et al, 2012; Fuller et al., 2007; Daley, 1995

Categorical principal components analysis (CATPCA). The following sections described the factor analysis process that was used to extract the final variables used for this study. A Categorical Principal Components Analysis (CATPCA) with a Varimax rotation of the Likert scale questions from the CJ-DATS2 implementation survey was conducted on data gathered from 205 participants. Categorical Principal Components Analysis is a type of factor analysis that "implements Categorical Principal Components factor analysis for categorical variables, use of which violates the data assumptions of ordinary principal components analysis" (Garson, Factor Analysis, 2013, p. 62). Often, factor analysis is used to reduce variable dimensions, as is the case for this research study. This particular type of factor analysis was chosen to reduce the number of variables per index because the survey instrument consists of categorical variables. An examination of the Model Summary Table and the Component Loadings were used to make decisions for the factor reduction.

To perform a CATPCA in SPSS, first select Analyze, Dimension Reduction, and Optimal Scaling. On the Optimal Scaling Dialogue, select "some variables are not multiple nominal" and "one set" to make sure the variables are analyzed as categorical. Next, you

enter the analysis variables. In this research study, each set of items per indexed IV were entered and run separately. SPSS gives the choice of how to weigh the variables; this study chose to keep the default of 1. Next, the data level needs to be chosen; in this case, ordinal was chosen due to the categorical variables. The next step is to make an assumption of how many dimensions are present within the variables. In this research study, the assumption was there being 1 dimension. However, as will be discussed in the CATPCA results section, the variable items were reduced due to several dimensions within one index. The next step is the Discretize Button, where this research study chose to code each variable as "5 categories" and "ranking" due to the ordinal nature of the items. On the Missing Button, the research can choose how to manage missing data. This research chose to "exclude objects with missing values on the variable" because a Missing Values Analysis was previously conducted and data imputed. When considering the analysis options under the Options, Output, Save, Category, and Loading Buttons, the default was selected. Under the Object Button, "objects and variables (biplot)" was chosen to display component loadings in a graph form. Lastly, the analysis is run and results analyzed.

CATPCA Results. The initial CATPCA results indicated that each indexed variable consisted of several dimensions. Ultimately, variables were reduced one by one to a single dimension. These reductions were based on a combination of factor loadings and literature regarding the variable.

This factor analysis revealed that the pre-validated indexes used in the secondary data are not valid for this population. Previous literature found that program needs/pressures for change and staff attributes are used to assess "service needs and organizational readiness for

implementation" (Lehman, Greener, & Flynn, 2012). However, these two concepts need to be separated, and these inconsistences will be explored further in the discussion. This factor analysis found that only the "program needs" items were uni-dimensional for assessing organizational readiness for change. The indexed variables of Administrative Champion and Bi-Directional Communication were each uni-dimensional and did not require factor removal. See Appendix D. for the factors removed by the CATPCA process, the rationale for each, and the final set of variables used in this research study. Once the factor loadings were sufficient for each variable, a reliability analysis was performed. The reliability analysis showed that perceived organizational readiness, administrative champion, training value, and bi-directional communication had a reliability score over .70, a standard in social sciences (Nunnally, 1978). Goal clarity and technology both had reliability scores between .5 and .6. However, these lows scores can be explained by the short item scale of these variables, and the inter-item matrices must be examined (Pallant, 2001). The inter-item correlations of each variable are positive and between .2 and .4, making them reliable, as suggested by Briggs & Cheek (1986). See Appendix D. for results.

Once the indexes were considered reliable, the items of each index were combined additively using the "Compute Variable" function in SPSS. Each index was renamed as a new variable: ORC, GoalClarity, AChamp, Technology, Training Value, and BiComm. The operationalizations in Table 6. Post- CATPCA Operationalizations below displays the variables after the factor analysis, but before the data has been cleaned. Several control variables will be removed later in the process due to multicollinearity, which is reflected in Table 5.

Table 6. Post-CATPCA Operationalizations

Variable	Related Hypotheses	Survey Item	Related Literature
Perceived Organizational Readiness		BSOC: Organization/unit help defining mission BSOC: Organization/unit help with goal setting BSOC: Organization/unit help assigning staff roles BSOC: Organization/unit help with job descriptions BSOC: Organization/unit help evaluating staff performance **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Hogue et al., 1996; Proctor, et al., 2011; Durlak & DuPre, 2008; Friedmann, et al., 2013; Pearson, et al., 2014; Shafer, Prendergast, Melnick, Stein, & Welsh, 2014; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Visher, et al., 2014; Lehman, Greener, & Flynn, 2012; Lehman, Greener, & Simpson, 2002
Goal Clarity	H1. Goal clarity will relate positively to perceived organizational readiness for change.	BSOC: Your duties are clearly related to the goals for your unit. BSOC: Your unit operates with clear goals and objectives. BSOC: Staff members at your program understand how program goals fit as part of the treatment system/corrections system. BSOC: You have a clear plan for leading your unit. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004

Table 6. Continued

Administrative Champion	H2. An administrative champion will relate positively to perceived organizational readiness for change.	BSOC: Inspires others with his/her plans for this agency for the future. BSOC: Leads by example. BSOC: Gets people to work together for the same goal. BSOC: Insists only on the best performance. BSOC: Treats each of us as individuals with different needs, abilities, and aspirations. BSOC: Encourages new ways of looking at how we do our jobs. BSOC: Gives special recognition to others' work when it is very good. BSOC: Provides well-defined performance goals and objectives. BSOC: Emphasizes using new ideas, services, administrative techniques, etc., before most other agency supervisors do. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Fuller et al., 2007; Flaspohler, Meehan, Maras, & Keller, 2012; Greenhalgh et al., 2004), Gottfredson and Bauer, 2007, and the Social and Character Development Research Consortium 2010; Kraft et al., 2000; Hailey & Balogun, 2002; Lee & Cheung, 2004; Broome, Knight, Edwards, & Flynn, 2009; Funk, Champagne, Wiese, & Tornquist, 1991

Table 6. Continued

Technology	H3. Technology (inadequate) will negatively relate to perceived organizational readiness.	BSOC: Outdated equipment BSOC: Need more computers **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Weiner, 2009; Jennett et al., 2005; Hailey & Balogun, 2002; Lee & Cheung, 2004
Training Value	H4. Organizational training (value) will relate positively to perceived organizational readiness for change.	BSOC: Training a priority BSOC: In-service trainings **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	Escoffery, Carvalho, & Kegler, 2012; Dusenbury, Brannigan, Falco, & Hansen, 2003; Lehman, Greener, & Flynn, 2012

Table 6. Continued

Bi-Directional Communication	H6. Bi-directional communication between correctional settings will relate positively to perceived organizational readiness for change.	1. **IAC-Resources (HSS):** To the best of your knowledge, to what extent does your organization SHARE the following with other organizations that provide HIV services to persons under correctional care? (yes/no) • Funding • Purchasing of services • Facility space • Record keeping and/or management information systems data 2. **IAC-Development (HSS):** To the best of your knowledge, to what extent does your organization SHARE the following with other organizations that provide HIV services to persons under correctional care? (yes/no) • Developing programs or services • Program evaluation • Staff training • Informing the public of available services 3. **IAC-Policy (HSS):** To the best of your knowledge, to what extent does your organization SHARE the following with other organizations that provide HIV services to persons under correctional care? (yes/no) • Information about services • Case conference or case reviews • Informal agreements • Formal written agreements • Voluntary contractual relationships	Leeman, Jilcott-Pitts, & Myers, 2014; Brodowski, et al., 2013; Friendmann et al., 2013; Lane, et al., 2012; Firesheets, Francis, Barnum, & Rolf, 2012; Nowell, 2009; Berry-James, 2012; Dedrick & Greenbaum, 2011

Table 6. Continued

Employee Experience		How long have you been working in the substance abuse field as a counselor, therapist, or clinician/in the medical field/corrections field?	Weiner, 2009; Jennett et al., 2005; Hailey & Balogun, 2002; Lee & Cheung, 2004
Correctional Setting		• Secured • Community	Lehman, Greener, & Flynn, 2012; Guerra and Backer, 2003; Guerra & Knox, 2008; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Gregory Jr, et al, 2012; Fuller et al., 2007; Daley, 1995
Correctional Type		• Probation • Prison • Prison substance abuse treatment program • Parole • TASC • Community substance abuse treatment program • Work release center • Community health clinic • Other	Lehman, Greener, & Flynn, 2012; Guerra and Backer, 2003; Guerra & Knox, 2008; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Gregory Jr, et al, 2012; Fuller et al., 2007; Daley, 1995

Table 6. Continued

Years Working			
• **Unit/Agency**		• Less than 5 • 5 – 9.99 • 10 – 19.99 • 20 – 29.99 • 30 or more	
• **Program**		• Less than 5 • 5 – 9.99 • 10 – 19.99 • 20 – 29.99 • 30 or more	
• **Position**		• Less than 5 • 5 – 9.99 • 10 – 19.99 • 20 – 29.99 • 30 or more	

Data Analysis

Data cleaning in SPSS. Before the HIV-STIC data can be used, it needs to be cleaned and recoded, which was done in the statistical software package, SPSS. The data was put in an aggregated format for analysis by correctional setting. It is important to consider how missing data are handled within a dataset, and to run preliminary descriptive statistics on the data to check for missing data. In addition, several survey items were recoded into the variable operationalizations indicated by the CATPCA.

Data imputation in SPSS. In order to impute data in this study, multiple imputation was utilized. Multiple imputation has a specific procedure that must be followed (Garson, 2012). See Appendix C. Univariate Statistics, Missing Cases By Item, and Summary of Missing Values Tables for this analysis. The first step is to analyze the frequencies of each variable, which was previously done. The second step is to complete a missing values

analysis. By selecting “analyze” and then “missing values analysis”, we receive output regarding the univariate statistics, t-test output, and cross tabulations of any categorical vs. indicator variables. This output helps us to see what values are missing.

The third step is a patterns analysis, by selecting “analyze, missing values analysis, and patterns”. This step helps us to determine whether or not the missing values are at random, such as certain values missing in all cases, or certain values missing in some cases. The fourth step of data imputation is to analyze the patterns of missingness by selecting “analyze, multiple imputation, and analyze patterns”. This step provides information on the overall summary of missing values according to variables, cases, and values

The researcher performs the data imputation, by selecting “analyze, multiple imputation, and impute missing data”. A new dataset is created where the imputed data are saved, which provides the researcher with new descriptive statistics. Next, the file is split, so that the software recognizes that we have original data and imputed data. Lastly, bivariate correlations are performed. See Appendix A and B– Bivariate Correlations. The data are now ready to be analyzed in SPSS.

Descriptive statistics in SPSS. A total of 385 surveys were collected. After imputation, there are 205 valid cases (listwise) using the current dependent and independent variables. Table 7 below shows the variable descriptive statistics, as well as control variable statistics, using the imputed data.

Table 7. Variable Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Site ID	205	1119	9155	5026.96	2850.66
ORC	205	5	25	14.44	5.06
GoalClarity	205	2	14.37	7.12	1.79
AChamp	205	9	47.10	33.16	7.81
Technology	205	2	10	6.46	2.25
Training Value	205	2	10	6.94	2.13
BiComm	205	13	78	54.15	18.49
Correctional Setting	205	0	1	0.35	0.48
Correctional Type	205	2	11	5.32	3.18
Experience	205	1	5	2.365	1.23
Working at unit/program - years	205	1	4	1.86	0.98
Working at agency - years	205	1	5	2.26	1.14
Working in position - years	205	1	4	1.68	0.90
Valid (listwise)	205				

The distribution of the dependent variable Perceived Organizational Readiness, an ordinal variable, is displayed below. See Figure 8.

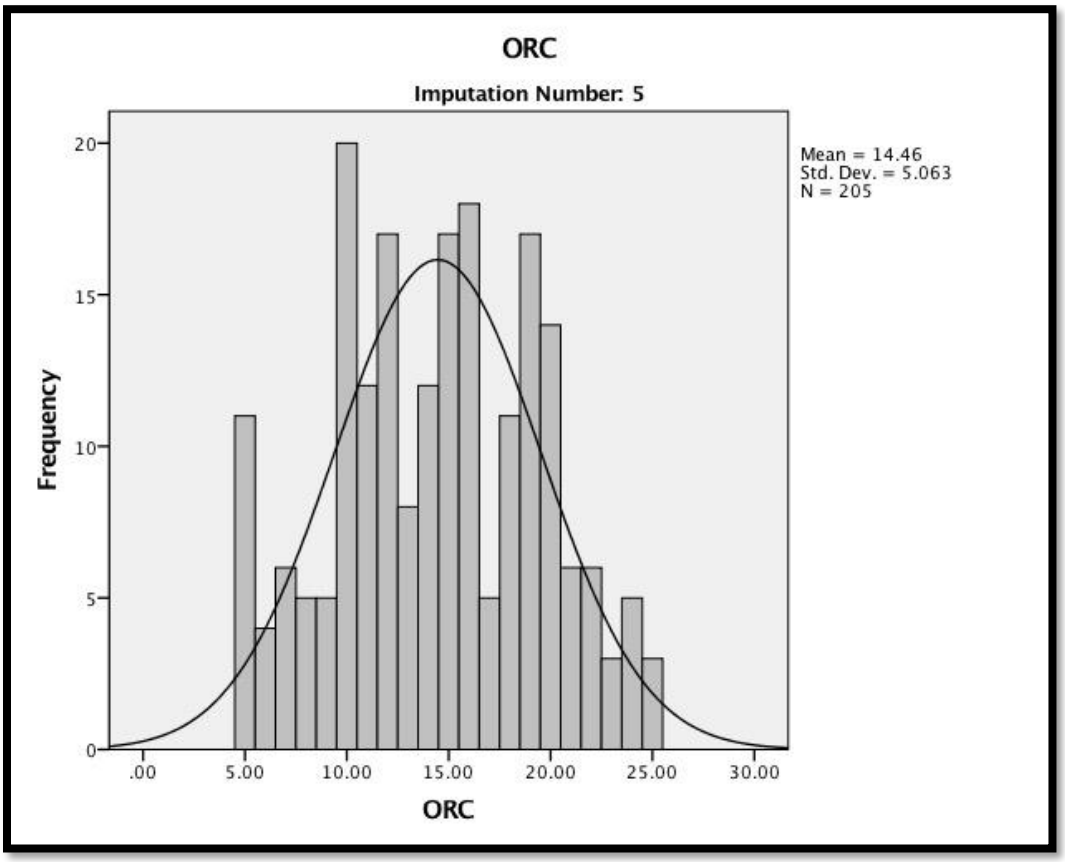

Figure 8. Perceived Organizational Readiness Distribution

A one-way ANOVA was performed (see Table 8 below) to test for differences between the different correctional settings (SITE ID), and it was found to be significant at a .05 level, with an eta of .28, where 28% of the total variance is accounted for by the treatment effect at each imputation level.

Table 8. Setting One-Way ANOVA

Imputation Number		Sum of Squares	df	Mean Square	F	Sig.
Original data	Between Groups	1433.839	36	39.829	1.756	.010
	Within Groups	3651.050	161	22.677		
	Total	5084.889	197			
1	Between Groups	1490.024	36	41.390	1.841	.005
	Within Groups	3777.898	168	22.487		
	Total	5267.922	204			
2	Between Groups	1456.135	36	40.448	1.820	.006
	Within Groups	3732.674	168	22.218		
	Total	5188.810	204			
3	Between Groups	1444.426	36	40.123	1.786	.008
	Within Groups	3775.155	168	22.471		
	Total	5219.580	204			
4	Between Groups	1472.399	36	40.900	1.802	.007
	Within Groups	3812.752	168	22.695		
	Total	5285.151	204			
5	Between Groups	1464.266	36	40.674	1.815	.006
	Within Groups	3764.709	168	22.409		
	Total	5228.976	204			

Linear mixed modeling in SPSS. Linear mixed modeling, also known as hierarchical linear modeling (HLM), is a mixed model that uses hierarchical data (nested), while focusing on the differences between groups in relation to the differences within groups of a sample (Raudenbush & Bryk, 2002). LMM was thought to be appropriate for this study because it intended to understand how organizational level variables have an effect on group level perceptions of organizational readiness. The individual level data for organizational factors that have an effect on the individual level organizational readiness would be assessed

simultaneously as the group level data for organizational factors that have an effect on the group level perceived organizational readiness (See Figure 9 below). However, the ICC was found to be non-significant and did not proceed with LMM.

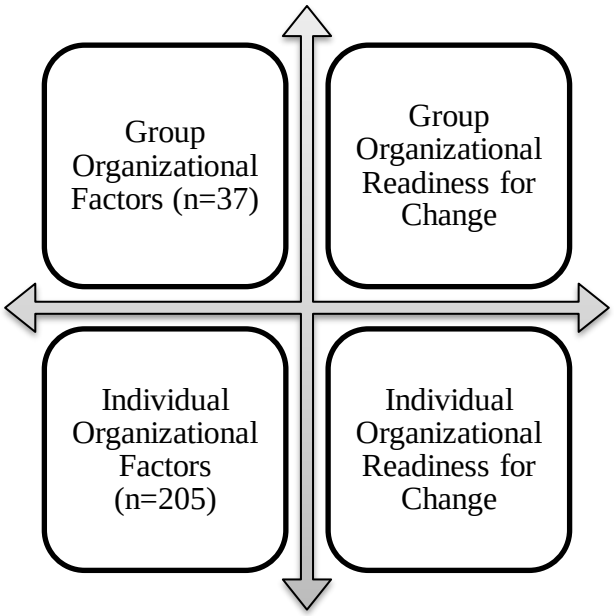

Figure 9. HLM Model

The next section will briefly outline the process that lead to the discovery of a non-significant ICC.

Pre-Analysis in SPSS. Prior to conducting an LMM analysis, there are several possible issues with the dataset that need to be investigated. First, the data needs to be tested to see if it is appropriate for LMM. To do this, the intra-class correlation coefficient (ICC) should be calculated from the baseline model. Once the baseline model is run, the formula for the ICC is (intercept variance) / (intercept variance + level 1 variance). The researcher

wants a significant ICC, as a "significant ICC means there is significant clustering by group of individual level values of the target variable" (Garson, 2013, p. 27). This significance means that using LMM is appropriate for the data, as there are differences between groups.

Intra-Class Correlation Coefficient. The first step to analyzing data using LMM in SPSS is to calculate the intra-class correlation coefficient (ICC), which tells us whether or not there is a grouping effect on perceived organizational readiness. In order to calculate the ICC, a null model is computed using the intercept of perceived organizational readiness at level 1 as a random function of the correctional setting. The steps to calculate the ICC can be found in Appendix E – SPSS Keystrokes. The ICC output consists of three charts: The Information Criteria Table, The Fixed Effects Table, and The Covariance Parameters for Random Effects Table.

The Information Criteria Table. This table serves as the "baseline when comparing other models in the likelihood ratio tests" (Garson, Hierarchical Linear Modeling, 2013, p. 126). See Table 9. Null Model Information Criteria results below.

Table 9. Null Model Information Criteria

Original data	-2 Restricted Log Likelihood	1200.944
	Akaike's Information Criterion (AIC)	1204.944
	Hurvich and Tsai's Criterion (AICC)	1205.006
	Bozdogan's Criterion (CAIC)	1213.511
	Schwarz's Bayesian Criterion (BIC)	1211.511
1	-2 Restricted Log Likelihood	1242.586
	Akaike's Information Criterion (AIC)	1246.586
	Hurvich and Tsai's Criterion (AICC)	1246.646
	Bozdogan's Criterion (CAIC)	1255.222
	Schwarz's Bayesian Criterion (BIC)	1253.222

Table 9. Continued

2	-2 Restricted Log Likelihood	1239.993
	Akaike's Information Criterion (AIC)	1243.993
	Hurvich and Tsai's Criterion (AICC)	1244.053
	Bozdogan's Criterion (CAIC)	1252.629
	Schwarz's Bayesian Criterion (BIC)	1250.629
3	-2 Restricted Log Likelihood	1241.575
	Akaike's Information Criterion (AIC)	1245.575
	Hurvich and Tsai's Criterion (AICC)	1245.634
	Bozdogan's Criterion (CAIC)	1254.211
	Schwarz's Bayesian Criterion (BIC)	1252.211
4	-2 Restricted Log Likelihood	1243.816
	Akaike's Information Criterion (AIC)	1247.816
	Hurvich and Tsai's Criterion (AICC)	1247.876
	Bozdogan's Criterion (CAIC)	1256.453
	Schwarz's Bayesian Criterion (BIC)	1254.453
5	-2 Restricted Log Likelihood	1241.650
	Akaike's Information Criterion (AIC)	1245.650
	Hurvich and Tsai's Criterion (AICC)	1245.710
	Bozdogan's Criterion (CAIC)	1254.287
	Schwarz's Bayesian Criterion (BIC)	1252.287

The Fixed Effects Table. The Fixed Effects Table gives two pieces of information. First the Type III Tests of Fixed Effects, which gives the F test of the model. Second, this table displays the Estimates of Fixed Effects, which displays the level 1 intercept. See Tables 10 and 11 below for The Fixed Effects results.

Table 10. Type III Tests of Fixed Effects

Imputation Number	Source	Numerator df	Denominator df	F	Sig.
Original data	Intercept	1	27.415	986.917	.000
1	Intercept	1	28.118	970.299	.000
2	Intercept	1	27.369	1000.037	.000
3	Intercept	1	27.129	1008.614	.000
4	Intercept	1	27.591	992.888	.000
5	Intercept	1	27.298	993.557	.000

Table 11. Estimates of Fixed Effects

Imputation Number	Parameter	Estimate	Std. Error	df	t	Sig.	95% Confidence Interval		Fraction Missing Info.	Relative Increase Variance	Relative Efficiency
							Lower Bound	Upper Bound			
Original data	Intercept	14.436481	.459538	27.415	31.415	.000	13.494254	15.378708			
1	Intercept	14.400318	.462295	28.118	31.150	.000	13.453528	15.347107			
2	Intercept	14.427239	.456221	27.369	31.623	.000	13.491741	15.362737			
3	Intercept	14.391733	.453159	27.129	31.759	.000	13.462134	15.321331			
4	Intercept	14.451705	.458637	27.591	31.510	.000	13.511602	15.391808			
5	Intercept	14.427360	.457710	27.298	31.521	.000	13.488696	15.366025			
Pooled	Intercept	14.419671	.458367		31.459	.000	13.521286	15.318056	.003	.003	.999

The Covariance Parameters for Random Effects Table. The Covariance Parameters for Random Effects Table is arguably the most important table is determining if a research study should use LMM. This table tells us if the variance components for level 2 is significant, which means that there is a group effect. A grouping effect tells us that the ICC is significant and multi-level modeling is necessary. See Table 12. below for the Covariance Parameters for Random Effects results.

Table 12. Estimates of Covariance Parameters

Imputation Number	Parameter		Estimate	Std. Error	Wald Z	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Original data	Residual		23.089760	2.596753	8.892	.000	18.522108	28.783821
	Intercept [subject = SITEID]	Variance	3.006396	2.014481	1.492	.136	.808510	11.179097
1	Residual		22.863855	2.512224	9.101	.000	18.434083	28.358116
	Intercept [subject = SITEID]	Variance	3.259996	2.010717	1.621	.105	.973215	10.920072
2	Residual		22.634752	2.493081	9.079	.000	18.239841	28.088622
	Intercept [subject = SITEID]	Variance	3.110890	1.984918	1.567	.117	.890782	10.864202
3	Residual		22.903735	2.522945	9.078	.000	18.456222	28.422994
	Intercept [subject = SITEID]	Variance	2.970306	1.962762	1.513	.130	.813452	10.846026
4	Residual		23.099137	2.541116	9.090	.000	18.618976	28.657329
	Intercept [subject = SITEID]	Variance	3.105072	1.994812	1.557	.120	.881513	10.937417
5	Residual		22.826392	2.514750	9.077	.000	18.393384	28.327804
	Intercept [subject = SITEID]	Variance	3.123662	2.000430	1.561	.118	.890317	10.959320
Pooled	Residual		22.865574	2.523468		.000	17.919629	27.811520
	Intercept [subject = SITEID]	Variance	3.113985	1.993968		.118	-.794130	7.022101

The ICC pre-analysis shows that the coefficient is not significant, and a random intercept model is not required, making LMM not required. A non-significant ICC tells us that the observations within SITE ID (grouping variable) are no more similar than observations from other groups. In other words, the grouping variable does not significantly

affect the estimate of the mean of the level 1 DV. Therefore, this analysis will proceed using ordinary least squares.

Limitations

There are several limitations to this study. First, this study contains mono method bias because all the data comes from a single source, and is not cross validated using another measurement method. Mono method bias can affect construct validity as we are only using one tool to measure our dependent variable. How do we know if the measurement really represents our construct without another measurement tool to confirm it? The most appropriate way to combat mono method bias is to introduce another measure, however, this cannot be done using secondary data. Therefore, this research can only recognize and note that our construct validity is threatened by mono method bias.

The second limitation of this study is due to secondary data use. There are several limitations to using secondary data. Because this study uses secondary data, we do not have control over how it was originally collected, and must work within the boundaries of the data. In addition, because data was collected voluntarily, it is only a sample and not the total population. The data are also limited by the response rate of baseline data vs. follow up measures. For example, individuals who entered the study after the baseline measure were not asked to complete a baseline/individual characteristics survey. Therefore, we were not able to get baseline data on some individuals who participated.

In addition, because this sample was purposive and not random, this study will concentrate on reporting effect sizes over significance. Because this study does not have a

random sample, significance coefficients do not have the usual meaning but are reported to follow social science convention.

Secondary data introduces two additional limitations: omitted variable bias and cross sectional data. Omitted variable bias is a concern because there may be variables that have a significant effect on the dependent variable that were not available/measured. There is always a chance that omitted variable bias could skew the results. Another limitation is the cross-sectional nature of the study, which does not allow us to measure perceptions of organizational readiness over time.

The third limitation of this study is group sizes in LMM. While this study did not use LMM, it is still important to discuss this limitation because a low number of observations per group may have contributed to the non-significant ICC. There is much debate to the proper group size within the highest level of a hierarchical model. Many statisticians are of the opinion that there should be a large sample in level 1 and a minimum of 20 groups in level 2, as well as a large number of observations per group. The sample in Table 13 below shows the number of groups (37) in the sample, as well as the number of observations (1-17) per group.

Table 13. HLM Group Frequency

Site ID #	Frequency	Percent
1119	6	2.9
1121	5	2.4
1123	4	2.0
1127	4	2.0
1135	7	3.4
1137	6	2.9
1142	5	2.4

Table 13. Continued

1146	2	1.0
2133	4	2.0
2136	17	8.3
2143	4	2.0
3117	3	1.5
3131	5	2.4
3144	8	3.9
4132	2	1.0
4144	4	2.0
5133	3	1.5
5143	5	2.4
6124	6	2.9
6125	3	1.5
6126	8	3.9
6128	10	4.9
6130	9	4.4
6134	7	3.4
6138	11	5.4
7132	1	.5
7133	2	1.0
7136	3	1.5
7143	3	1.5
8118	4	2.0
8129	3	1.5
8134	5	2.4
8138	5	2.4
9132	5	2.4
9136	9	4.4
9143	8	3.9
9155	9	4.4
Total Individuals Per Group	205	100.00
Total Groups	37	100.00

In looking at the variation of observations per group, dropping the smaller groups would be considered. However, several statisticians have found that small groups have not affected the study results. For example, the fixed effects of multi-level studies have not been

biased by as little as 5 observations (Church, et al., 2012). In addition, smaller numbers of groups at level 2 have not been a large problem for statisticians. According to Bell, Morgan, Kromrey, & Ferron (2010):

> "The results of this study are encouraging for researchers who analyze multilevel data with sparse structures. As with previous investigations of small cluster sizes, regardless of model complexity, the proportion of singletons in the simulated samples had little impact on either the point or interval estimates of model parameters when large numbers of level-2 units were included. With smaller numbers of level-2 units, increasing the proportion of singletons led to a reduction in the accuracy of the confidence intervals for level-2 predictors and bias in the Type I error control of the binary level-2 predictor, but did not impact the accuracy of the estimates for level-1 predictors" (p. 4063).

After reviewing the success of prior studies with a small sample size, it was concluded that the small sample size in this research study is a minor issue. However, LMM will not be used in this study going forward due to a non-significant ICC.

CHAPTER FOUR

RESEARCH FINDINGS

This chapter presents the findings of the ordinary least squares analysis. It will present the findings based on the output of each analysis variable and the interpretation of coefficients. Finally, the findings are interpreted based on the research questions and hypotheses of this study, and conclusions made.

Analysis - Ordinary Least Squares (OLS).

As the LMM results indicated, linear mixed modeling is not required for this data because there was not significant clustering around the grouping variable, SITE ID. Therefore, this research ran an OLS model to understand the association between the dependent variable and independent variables, treating SITE ID as the "break" variable for aggregation by median for all ordinal variables treated as continuous. The data needs to be aggregated before analysis, as the data are at the individual level but the theory guiding this study is at the organizational level. The steps to complete an OLS analysis are in Appendix E – SPSS Keystrokes.

Model Summary Table. The output from OLS analysis consists of the Model Summary, ANOVA Model, and Coefficients Table. The Model Summary Table provides information on how well the regression line accounts for the total variation in the dependent variable (R Squared), or the overall model fit. See Table 14. Model Summary below for the analysis results.

Table 14. OLS Model Summary

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Original data	1	.672[a]	.452	.441	2.11850
1	1	.672[a]	.452	.441	2.11850
2	1	.672[a]	.452	.441	2.11850
3	1	.672[a]	.452	.441	2.11850
4	1	.672[a]	.452	.441	2.11850
5	1	.672[a]	.452	.441	2.11850

As noted earlier, this study uses multiple imputation where pooled results are provided. However, SPSS does not provide pooled results for the Model Summary, but provides the R Squared statistic for each data imputation. The R Squared is .452 for each iteration, indicating that this model explains 45.2% of the total variation in ORC.

The ANOVA Model. The ANOVA Model displays the model significance. See Table 15. Iteration 5 OLS ANOVA below for the analysis results, which state that the model is significant. (All iterations were identical)

Table 15. OLS ANOVA

Imputation Number	Model	Sum of Squares	df	Mean Square	F	Sig.
Original data	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			

Table 15. Continued

1	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			
2	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			
3	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			
4	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			
5	Regression	740.204	4	185.051	41.232	.000[a]
	Residual	897.608	200	4.488		
	Total	1637.812	204			

Coefficients Table. The Coefficients Table provides the effect size and significance for each predictor in the model. The full model is presented below in Table 16. OLS Full Model. The full model shows three non-significant variables: AChamp, Training Value, and BiComm. AChamp is removed first based on being the most non-significant variable at .080.

Table 16. OLS Full Model

Model Variable	B	Standard Error	Beta[2]	t	Sig.
(Constant)	18.707	2.388		7.833	.000
GoalClarity	-1.319	.178	-.463	-7.394	.000
AChamp	.094	.054	.111	1.752	.080
Technology	.513	.109	.257	4.701	.000
Training Value	-.347	.138	-.157	-2.518	.012
BiComm	-.027	.015	-.110	-1.801	.072
CorrectionalSetting	-1.225	.330	-.207	-3.709	.000
Experience	1.307	.171	.406	7.627	.000

See Table 17. OLS Model AChamp Removed below for the model after AChamp was removed due to nonsignificance.

Table 17. OLS Model AChamp Removed

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

2 It should be noted that the pooled OLS results in SPSS do not report standardized coefficients. Therefore, the standardized coefficients presented in regression tables had to be pulled from imputation iterations. The standardized coefficients were the same for each iteration.

All variables in the model are now significant at a .05 level and will be used for interpretation. See Table 18. OLS Coefficients Table below.

Table 18. OLS Coefficients Table

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

The interpretation of the Pooled Coefficients Table are as follows:

1. Goal Clarity is negatively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in goal clarity, perceived organizational readiness for change decreases by 1.243 points.**

2. Technology (Inadequate) is positively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in technology, perceived organizational readiness for change increases by .531 points.**

3. Training Value is negatively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in training value, perceived organizational readiness for change decreases by .253 points.**

4. Bi-Directional Communication is negatively and significantly associated with ORC, controlling for all other variables. **For every one unit increase in BDC, perceived organizational readiness for change decreases by .029 points.**

5. Correctional Setting is negatively and significantly associated with ORC, controlling for all other variables. Correctional Setting is the average difference in ORC between secured settings (reference category) and community settings. **Compared to secured settings, we would expect community settings to be 1.335 points lower on the ORC index, on average.**

6. Experience is positively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in experience, perceived organizational readiness for change increases by 1.297 points.**

In examining the b coefficients, Experience appears to be the most important independent variable, compared to the other variables. Correctional Setting is the most important variable, followed by Experience and Goal Clarity. Technology is the lease important predictor of organizational readiness compared to the other variables.

Findings

The findings of this study are first organized according to each research hypothesis. Second, the findings are examined according to each research question.

Hypothesis 1. The first hypothesis in the research study states: Goal clarity relates positively to perceived organizational readiness for change. The OLS analysis found that GoalClarity is negatively significant at the .000 level, with a large effect size. This effect size is based on Cohen's classification of small, medium, and large effect sizes, where .2 represents a small effect, .5 represents a medium effect, and .8 represents a large effect (Cohen, 1992). This means that for an effect size to be small or trivial it cannot be easily seen by the naked eye, and the two groups do not differ by .2 standard deviations (Cohen, 1992). The results below also will follow Cohen's (1992) recommendation for effect size categories.

See Table 19. GoalClarity below. The results are significant, but the hypothesis is unsupported.

Table 19. GoalClarity

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	**-1.243**	**.174**	**-.436**	**-7.147**	**.000**
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

Hypothesis 2. The second hypothesis in the research study states: An administrative champion relates positively to perceived organizational readiness for change. The OLS model found AChamp to be non-significant in relationship to ORC and removed from the model. See Table 20. AChamp below. This hypothesis is not supported by the data.

Table 20. AChamp

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	18.707	2.388		7.833	.000
GoalClarity	-1.319	.178	-.463	-7.394	.000
AChamp	**.094**	**.054**	**.111**	**1.752**	**.080**
Technology	.513	.109	.257	4.701	.000

Table 20. Continued

Training Value	-.347	.138	-.157	-2.518	.012
BiComm	-.027	.015	-.110	-1.801	.072
CorrectionalSetting	-1.225	.330	-.207	-3.709	.000
Experience	1.307	.171	.406	7.627	.000

Hypothesis 3. The third hypothesis in the research study states: Technology (inadequate) will negatively relate to perceived organizational readiness. The OLS analysis found Technology to be positively significant at .000, with an effect size of .531. This medium effect size means that the two groups differ by .5 standard deviations. See Table 21. Technology below. The results are significant, but the hypothesis is unsupported by the data.

Table 21. Technology

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	**.531**	**.109**	**.266**	**4.873**	**.000**
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

Hypothesis 4. The fourth hypothesis in the research study states: Organizational training (value) relates positively to perceived organizational readiness for change. The OLS analysis results showed that training (value) is significant but negatively related to perceived

organizational readiness, with an effect size of -.253. As Training Value increases, ORC decreases. See Table 22. Training Value below, where the results are significant but the hypothesis unsupported.

Table 22. Training Value

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	**-.253**	**.128**	**-.115**	**-1.985**	**.047**
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

Hypothesis 5. The fifth hypothesis in the research study states: Bi-directional communication between correctional settings relates positively to perceived organizational readiness for change. The OLS analysis results showed that bi-directional communication is significantly but negatively related to ORC. As bi-directional communication increases, ORC decreases. See Table 23. BiComm below. The results are significant, but the hypothesis unsupported.

Table 23. BiComm

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	**-.029**	**.015**	**-.118**	**-1.925**	**.054**
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	1.297	.172	.403	7.533	.000

Control Variables. It is important to understand if control variables have a significant impact on the dependent variable. The most important control variable to this study is Correctional Setting (secured vs. community), based on the second research question. This variable was found to be significant with an effect size of -1.335. This large effect size means that two groups differ by 1.3 standard deviations. See Table 24. Correctional Setting below.

Table 24. Correctional Setting

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	**-1.335**	**.326**	**-.225**	**-4.094**	**.000**
Experience	1.297	.172	.403	7.533	.000

The second control variable is experience, is a significant factor (.000) with an effect size of 1.297. This large effect size means that two groups differ by 1.3 standard deviations. See Table 25. Experience below. Experience is positively and significantly associated with ORC, controlling for all other variables.

Table 25. Experience

Model Variable	B	Standard Error	Beta	t	Sig.
(Constant)	20.751	2.095		9.905	.000
GoalClarity	-1.243	.174	-.436	-7.147	.000
Technology	.531	.109	.266	4.873	.000
Training Value	-.253	.128	-.115	-1.985	.047
BiComm	-.029	.015	-.118	-1.925	.054
CorrectionalSetting	-1.335	.326	-.225	-4.094	.000
Experience	**1.297**	**.172**	**.403**	**7.533**	**.000**

Research Questions. Using the results of the OLS analysis, this section answers each research question.

Research Question 1. The first research question asked: What organizational characteristics lead to organizational readiness for change in correctional settings when preparing for a change? The OLS analysis states that goal clarity (negative), technology (positive), training value (negative), correctional setting (negative), experience (positive), and bi-directional communication (negative) are significant predictors of perceived organizational readiness for change. However, an administrative champion was not a significant predictor. These results are unexpected, as goal clarity was not expected to have a

negative effect on perceived organizational readiness. Even more so, the results show that inadequate technology actually has a positive effect on perceived organizational readiness. These interesting and unexpected outcomes that will be further discussed in Chapter 5.

Research Question 2. The second research question asked: Does the type of correctional setting matter? Does a controlled setting, such as a prison or jail, differ than a community setting, such as probation? The OLS results indicated that correctional setting does matter. The results indicated that on average, compared to secured settings, community settings are less organizationally ready for change.

Conclusion

This chapter displayed the results of the analyses, as well as discussed what the results mean in relation to the hypotheses and research questions. The results showed that goal clarity, technology, correctional setting, training (value), experience, and bi-directional communication are significant predictors of perceived organizational readiness; while an administrative champion is not a significant predictor. The interpretations and conclusions based on the will be discussed in the Chapter 5 Conclusions, Implications, and Suggestions for Future Research.

CHAPTER FIVE

CONCLUSIONS, IMPLICATIONS, & SUGGESTIONS FOR FUTURE RESEARCH

This chapter will provide a summary of the study findings, as well as an extensive discussion of each variable finding by hypothesis. In addition, the findings will be used to discuss the implications of this study (for academia and practitioners), as well as recommendations for future research.

Implementing a change within an organization can be a difficult task. Because of this, knowing how to implement a change more efficiently and understand what makes an organization more ready to do so is very important. This research studied looked at perceived organizational readiness for change in correctional settings ranging from community to secure settings. Understanding what makes a correctional setting ready for change is important because this setting is unlikely to embrace change, as regulations enforce safety first. After an extensive literature review, this studied asked two questions: (1) What type of organizational characteristics lead to readiness for change in a correctional setting when preparing for a change? And (2) Does the type of correctional setting matter? Specifically, this study looked at how the organizational factors of goal clarity, an administrative champion, technology, training (value), experience, and bi-directional communication are associated with perceived organizational readiness for change. To answer this question, the study used secondary survey data, analyzed through ordinary least squares.

Overall, this study found that when organizational readiness predictors are applied to correctional settings, they contradict the literature. This tells us that context really matters

when it comes to organizational readiness. Context matters regarding the environment, such as whether the system is open (community) or closed (secured). The context of the actual change being implemented also matters. In this case, implementing an HIV innovation may have affected the results of this study, as there is a large amount of stigma around individuals infected with HIV.

Summary of Findings by Research Question

RQ1: Organizational characteristics. The first research question asked: What organizational characteristics lead to organizational readiness for change in correctional settings when preparing for a change? The OLS analysis found that goal clarity (negative), technology (positive), training value (positive), bi-directional communication (negative), experience (positive), and correctional setting (negative) are the significant organizational factors related to readiness for change. An administrative champion is not a significant factor in perceived organizational readiness.

RQ2: Correctional setting. The second research question asked: Does the type of correctional setting matter? Does a controlled setting, such as a prison or jail, differ than a community setting, such as probation? The OLS results indicated that correctional setting does matter. On average, compared to secured settings, community settings are less organizationally ready for change. Overall, the answer to "does setting matter?" is yes.

The literature tells us that there has been minimal research conducted on differences in perceptions of organizational readiness between community and secured settings (Lehman, Greener, & Flynn, 2012). The problem lies in the "best fit" model of evidence-based practice because correctional settings are known for their unique environment, which may or may not

be conducive to change, resulting in flexible needs (Gregory Jr, et al., 2012; Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; & Wandersman, 2003). Even more so, “it is only through adapting the presentation and being flexible in their use that they can fit effectively into existing organizational cultures and be accepted by those charged with implementing them" (Gregory Jr, et al., 2012, p. 332). This leaves us with two literatures: one size fits all vs. adaptation and flexibility. Understanding if different correctional settings have different implementation needs is beneficial to the implementation and public administration literature.

Conclusions Based on Hypotheses/Variables

Hypothesis 1: Goal Clarity. The first hypothesis states: Goal clarity will relate positively to perceived organizational readiness. Goal clarity is defined by Anderson & West (1996) as “‘how clearly defined, shared, attainable, and valued are the team’s objectives and vision’ " (as cited in Peralta, Lopes, Gilson, Lourenco, & Leonor, 2015, p. 59). Goal clarity is important because clear organizational and program goals give management a greater sense of what is important to the change and how to achieve it (Moynihan, Pandey, & Wright, 2011). It gives employees a road map for the change. Weber & Weber (2001) found that goal clarity leads to more organizational readiness in a fire department. The current study attempted to understand how an agreed understanding of the goal of a change would influence the perceived organizational readiness of employees in a correctional setting. The results of this study show that goal clarity is significantly related to perceived organizational readiness for change, but in a negative direction. The effect size of this relationship was -1.243, meaning that as goal clarity increases perceived organizational readiness decreases.

If past literature has told us that goal clarity is important for organizational readiness, why are the results different in a correctional setting? It may be possible that the goal clarity of the change is not the most important part in operating a prison, but the security goal of the prison is most important. While the change being implemented is necessary, the security goal of the prison will always be top priority. While it is important to implement a change with the most fidelity as possible, security remains the most important goal in a prison.

Hypothesis 2: Administrative Champion. The second hypothesis states: An administrative champion relates positively to perceived organizational readiness for change. The motivation literature tells us that employees have an ability to influence their peers when implementing a change within the organization (Fuller, et al., 2007, p. 188). This study sought to understand how administrators influence employees to implement a change. The OLS results of this study showed that having an administrative champion is not significantly related to perceived organizational readiness for change, as hypothesized. The relationship between an administrative champion and perceived organizational readiness was positively associated as hypothesized, but was not significant. The effect size of this relationship was .094, meaning that the two groups were .09 standard deviations apart.

If peer-to-peer champions are effective, then why would an administrative champion be ineffective at increasing organizational readiness for change? One explanation is the reputation the champion has among the individuals they are trying to influence. Hendy & Barlow (2012) found that when champions must do "their work organization-wide, and share ideas outside their professional culture", individuals responded with "resistance, resulting in a lack of innovation spread" (p. 348). Because this study consisted of champions from

several different fields of practice within a prison, it may have affected the intent of an administrative champion. For example, a social work championing a correctional officer may cause an issue.

A second explanation is power structures in public correctional settings. Administration in correctional settings often answers to elected officials and government funding sources that dictate when an organizational change needs to take place. According to van der Voet (2014), “In a highly bureaucratic organization, an organizational change may require the top-down activation of employees by a top-management intervention, after which a bottom-up process may be initiated in which employees are involved in establishing the exact course of action” (p. 379). This can make administrative champions look insincere in their efforts to encourage employees to “get on board” with a new change. Even more so, employees can interpret the administrator’s enthusiasm with the change as based on an order from their superior. While peers have no advantage to supporting changes they don’t agree with. Therefore, organizations are better equipped to make changes if they encourage peer champions. This nonfinding is very important because we need to consider power structures in prisons when determining perceived organizational readiness, as those with more power may appear to have alternative motives for their championing behaviors.

Hypothesis 3: Technology. The third hypothesis states: Technology (inappropriate) negatively relates to perceived organizational readiness for change. The results of this study showed that technology (out of date the equipment) is positively associated with perceived organizational readiness for change. Past literature has found that a certain amount of structural readiness (including appropriate technology) was needed for individuals to feel

confident in making a change (Jennett, et al., 2005). However, this study found the opposite: inappropriate technology is significantly and positively related to perceived organizational readiness. The effect size of this negative finding was .531, meaning that the two groups differ by .58 standard deviations. Perhaps, technology is not as important in readiness to make an organizational change as the literature has asserted. Organizations may feel ready to make a change, regardless of technical readiness.

If past literature has told us that technology is important for organizational readiness, why is this not the case in correctional settings? One explanation is that technology is simply not important in a correctional setting. Because security takes precedence over all activities in a prison, proper record keeping and documentation of therapeutic services is a minor consideration when making a change. As Lehman, Greener, & Flynn (2012) found that many correctional counselors indicated the need for more guidance in using evidence-based programs and practices, support for making changes in organizational climate, and more training on procedures and new responsibilities (Lehman, Greener, & Flynn, 2012). This leads to an assumption that training may not be used often or valued in correctional settings.

A second explanation for why inadequate technology is positively associated with organizational readiness is the state and federal laws guiding public correctional settings. In looking at technology and privacy protections in prison, Goldstein (2014) found that "the structural tensions between increased use of technology and privacy produce similar challenges but the individuals involved (inmates) are sometimes afforded fewer privacy protections by regulations and courts" (p. 76). Because of unique concerns in correctional settings, they may not consider new technology when making a change. If the settings need

to work with the equipment they have, then technology will not be related to how ready they are to make a change.

A third explanation is that technology changes that come with a programmatical change can create unforeseen problems. New technology can be "perceived as interfering in that it created new technical problems" (Reynolds, 2015, p. 152). If employees are not technologically savvy, a change may be stressful if it comes with a technological change. For example, an individual could have been employed by corrections before advanced technologies were used in that setting. Introducing a new computer database could actually make employees less ready for a change because it creates anxiety and stress regarding the change.

Hypothesis 4: Training Value. The fourth hypothesis states: Training (value) positively relates to perceived organizational readiness for change. While the literature indicated that training (value) would relate positively to perceived organizational readiness, this study found training to be negatively related. The variable training value was based on the value of training at the agency, as well as how much in-service training takes place. This is an interesting and unexpected outcome because the literature on organizational readiness tells us that training is extremely important. Training is important because it helps employees understand the change, where to seek assistance when there are issues, and how the process of change happens (Escoffery, Carvalho, & Kegler, 2012). Even more, the literature tells us that training is important for the integrity, as well as the implementation of the change (Dusenbury, Brannigan, Falco, & Hansen, 2003). Literature also identifies correctional settings as unique when it comes to changes and may require more training than other

settings (Lehman, Greener, & Flynn, 2012). However, this study found that as the value of training increases, perceived organizational readiness for change decreases.

Why would the value an organization places on training have a negative effect on organizational readiness in correctional settings? One reason may be due to past experiences with trainings in correctional settings. Because of the strict structure, trainings on therapeutic changes could be seen as just a formality, with security still top priority. The more the organization is perceived to value the training, the more insincere it may look to the employees if it is not really valued. As Lehman, Greener, & Flynn (2012) reported, many counselors indicated the need for more guidance in using evidence-based programs and practices, support for making changes in organizational climate, and more training on procedures and new responsibilities. Therefore, these trainings do not really serve as a method to make organizations "ready" for a change or as a learning opportunity, but more as a formality.

A second explanation for why training value is negatively associated with organizational readiness is the connotation of change within correctional settings. Lehman, Greener, & Flynn (2012) found that correctional counselors reported less resources and more organizational climate barriers, as compared to community settings. Correctional settings are known for being resistant to change, as change can bring about security breaches. When employees learn of new changes within the organizations, it often creates a stress reaction, which may lead to resistance. While the organization as a whole may value training, the employees can be resistant to the change that the training is making them ready for.

Hypothesis 5: Bi-Directional Communication. The fifth hypothesis in the research study states: Bi-directional communication between correctional settings relates positively to perceived organizational readiness for change. The literature states that collaboration among the different implementation and change systems is important for long term change (Berry-James, 2012). Therefore, this study expected to find that bi-directional communication between correctional settings would be positively associated with perceived organizational readiness for change. However, the results of this study do not line up with the literature, and show that bi-directional communication is negatively associated with perceived organizational readiness.

Why is bi-directional communication between correctional settings negatively related to organizational readiness? The literature tells us that organizations need to be "ready" to properly implement a change, and communication helps to sustain these changes (Berry-James, 2012). This is even more important when we consider that many secured correctional clients will eventually be transferred to community settings. However, communication between correctional settings may not be a reality. Captain Ringler (2015), a Corrections Academy Training Specialist, describes communication within a correctional setting as difficult; meaning that communication between settings may not be a norm. Because it is not the norm, the information that is shared may be incorrect or unhelpful information.

Correctional settings may also not communicate with one another about a change process as there are gray areas regarding information they can share particularly when it comes to inmates infected with HIV. The red tape of a government run institution, as well as release of information forms may impede communication. In addition, if they do open

channels of communication with other prison settings, it will be difficult to control this information. Therefore, the prison keeps its methods and information within the setting. For example, prisons limit the communication between prisoners and individuals outside the prison by having very few computers and telephone access. According to Jewkes & Johnston (2009):

> "Fundamental ways of controlling and ordering prisoners rely on knowledge about them: officers listening to what is going on, segregating those whose communications have become uncontrollable – drug dealers, those in debt or fear, or those charged with terrorism – separating them, isolating them and using the prevention of communication to regulate and monitor the prison population" (p. 141).

The reasoning behind contained communication for prisoners may extend to correctional employees. It is easier to control the prison if communication is limited. If there is communication between prisons, it may not be information that is helpful to making the organization ready for a change. Therefore, restrictive communication may be used as a measure to prevent hearsay and gossip within the correctional setting.

Control Variable: Correctional Setting. Correctional setting was used as a control variable in this study, with the results used to answer the second research question. Past research has question if there is "one best way" for implementation or if adaptability of evidence-based programs and practices should be allowed (Visher, Yang, Mitchell, Patterson, Swan, & Pankow, 2015; Wandersman, 2003; Gregory Jr, et al., 2012). The results of this

study show that type of correctional setting is negatively associated with organizational readiness, with a large effect size. This means that compared to secured settings, community settings are 1.335 points lower on the ORC index (on average), making them less ready for a change.

Why does correctional setting (secured vs. community) matter? The data showed that community settings are perceived to be less likely to be ready for an organizational change. One explanation is that community correctional settings do not follow a paramilitary structure as jails and prisons do. This means that they do not share the same norms and organizational standards, rules, and culture because there is less confinement of their clients. Community settings such as probation and parole operate under different standards for change. The "lock and key" structure of secured settings may not apply.

So, why are secured settings more ready for an organizational change? It may be because the paramilitary structure allows them to have a strict regimen for implementing a change. Each prison operates in a similar manner, with similar standards and rules, making a change more uniform. Prison literature reports that a prison is a unique setting because security is always the biggest concern and change is not embraced because of communication issues, trust, and intolerance for changes (Lehman, Greener, & Flynn, 2012). Essentially, employees at secured correctional settings know the boundaries in which the change is allowed to happen. Community settings may leave room for interpretation, making it harder to know how exactly to implement a change.

Control Variable: Employee Experience. Employee experience was used as a control variable in this study, under the assumption that an employee's tenure in their field would

have an effect on their readiness for change. The literature showed that employees with less experience tend have more positive attitudes regarding change, as they have not had past negative experiences with change (Abdinnour-Helm, Lengnick-Hall, & Lengnick-Hall, 2003). This study attempted to understand how experience affects organizational readiness. The results showed that employee experience is positively and significantly related to perceived organizational readiness, with a large effect size.

Why does experience in a correctional setting lead to more perceived organizational readiness over other settings? One explanation may be the paramilitary environment of correctional settings. Because of a command and control power structure, change within this environment is very regimented. Perhaps, more experienced employees understand how a change will happen within a prison setting, purely based on their superior's instructions, allowing for little personal input. However, this reasoning also indicates that employees have little influence on the change process in this type of setting. It is more about how they understand the change process, not professional experience. In addition, of the individuals surveyed, approximately 80% have been in their field for less than 20 years, while approximately 20% of individuals have been working in their field for over 20 years. Perhaps the high number of newer employees, compared to more tenured employees had an effect on the results.

Implications

This study has found several significant indicators associated with organizational readiness, however, they were contraindicative to past literature: administrative champions are not associated with perceived organizational readiness, adequate technology is positively

related to perceived organizational readiness, training (value) is negatively associated with perceived organizational readiness, bi-directional communication is negatively associated with perceived organizational readiness, type of correctional setting is negatively associated with perceived organizational readiness, and employee experience is positively associated with perceived organizational readiness. Some of these results are contrary to what research tells us. Why is this? Literature on correctional settings tell us that a prison is a unique setting because security is always the biggest concern, not all prisons have appropriately qualified staff, and change is not embraced because of communication issues, trust, and intolerance for changes (Lehman, Greener, & Flynn, 2012). Therefore, the organizational readiness predictors that apply to non-correctional settings may not apply in correctional settings.

Overall, this study found that:

1. Goal Clarity is negatively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in goal clarity, perceived organizational readiness for change decreases by 1.243 points.**

2. Technology (Inadequate) is positively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in technology, perceived organizational readiness for change increases by .531 points.**

3. Training Value is negatively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in training value, perceived organizational readiness for change decreases by .253 points.**

4. Bi-Directional Communication is negatively and significantly associated with ORC, controlling for all other variables. **For every one unit increase in BDC, perceived organizational readiness for change decreases by .029 points.**

5. Correctional Setting is negatively and significantly associated with ORC, controlling for all other variables. Correctional Setting is the average difference in ORC between secured settings (reference category) and community settings. **Compared to secured settings, we would expect community settings to be 1.335 points lower on the ORC index, on average.**

6. Experience is positively and significantly associated with ORC, controlling for all other variables. **For every 1 unit increase in experience, perceived organizational readiness for change increases by 1.297 points.**

What does this mean for the public administration and organizational change literature and for practitioners in correctional settings? The next sections will address these questions.

Academia. This study highlights the tension between legislative laws and public administration of those laws, also referred to as the politics/administration dichotomy in public administration (Wilson, 1887). This dichotomy looks at the tension between those who create laws and those who carry them out. This type of dichotomy is evident in this study under a different context, where those who create implementation materials and those who carry them out may have opposing views. The literature has indicated that the variables chosen in this study should lead to organizational readiness in an organization, but this has not been true in a correctional setting. There is clearly a discrepancy between what is theoretically true, and what is true within the field.

A second theoretical implication of this study is that "context matters". While the literature may link certain variables to organizational readiness under non-correctional settings, they do not all apply to correctional settings. The context of a correctional setting is clearly unique from non-correctional settings. What is unclear is how much context matters, and what about that context matters? These questions will be addressed with future research.

Practitioners. The results of this study have many implications for practitioners implementing a change within a correctional setting. The evidence that administrative champions are not associated with perceived organizational readiness and employee experience being positively associated with perceived organizational readiness might be related. These two results are tied to the idea that it is very important to understand who is most influential in encouraging buy in for a new program implementation. When implementing a program, it needs to be done at the peer level, as we have seen that champions at the administrative level are not effective. This leads to the question: what peers are champions? The results show us that experience does make an individual more ready, meaning that senior employees may be more ready than other individuals. If experience is important, but administrative champions are not, future research should attempt to understand who the most influential peers are. Is there a threshold at which an individual has too much experience to effectively influence others?

The results on technology show that adequate technology does not positively correlate to perceived organizational readiness. In fact, inadequate technology can still lead to perceived organizational readiness. A change process can convey the idea that current resources are minimal but a new change within the organization can provide more resources. This will help employees be more ready for the change. Therefore, practitioners who are trying to implement a change within a correctional setting may find it useful to highlight the incentives and benefits of this new program that are directly related to the employees, which may include more resources, such as computers.

The results of the study on correctional setting show that context is important. Context is relevant when looking at the type of correctional setting (secured vs. community) on organizational readiness, but only to the extent that the correctional setting is compared to non-correctional settings. Secured correctional settings appear to be more ready for change than community settings. Therefore, when developing a change plan, practitioners should be ready to provide a change guide that is relevant to both secured settings as well as community settings.

In non-correctional settings, bi-directional communication is very important for implementation and sustainability of change within organizations. In correctional settings, bi-directional communication is negatively related to perceived organizational readiness. While it seems logical that communication with other correctional settings who are also making a change would be positive, this is not true. Therefore, practitioners implementing a change would benefit from using resources and collaboration within the organization to help employees get ready for a change. Future research may highlight the communication systems within prisons, and the manners in which they communicate with other correctional facilities (if at all).

Suggestions for Future Research

This study suggests several areas for future research. First, this study has shown that a prison has a very unique environment. Many of the factors that have an effect on perceived organizational readiness have not held with this study. Future research should look at how the prison work culture/organizational culture of correctional settings affects change readiness. Is the culture of correctional settings a large contributing factor to how an

organizational becomes ready for a change? As Taxman, Henderson, Young, & Farrell (2014) found, external coaching that targeted the social climate of the organization and staff knowledge/skills led to higher organizational readiness.

A second area for future research is communication systems within and between correctional settings. This study found that communication between correctional systems does not lead to higher perceived organizational readiness, as hypothesized. More research is needed to understand how communication happens within a correctional setting, and who communicates with whom. In addition, more research is needed to understand if and how individuals communicate between correctional settings.

A third area for future research is on the psychological profile of individuals who are ready for a change within an organization. Who are these people? The literature tells us that peer-to-peer champions are most influential in helping an organization be ready for a change. Therefore, future research should examine the characteristics of individuals who are most successful at influencing their peers to be ready for a change. Who are the people that are more influential in helping their peers be ready for a change implementation?

A final area for research is examining the context of an implementation. This study shows that what matters in a non-correctional setting may not matter in a correctional setting. But the question remains, if “context matters”, then how much does it matter, and when does it matter? What exactly matters about context? These questions need to be explored for future understanding of the unique correctional context.

Conclusion

This study looked at organizational readiness for change in correctional settings, using data from the National Criminal Justice Drug Abuse Treatment Studies. Specifically, this study investigated the factors that have a positive or negative effect on perceived organizational readiness to implement improved services after a NIATx Process Improvement Model in a correctional setting. This study was most interested in understanding how goal clarity, an administrative champion, technology, training (value), and bi-directional communication affect the perceived organizational readiness within the correctional setting, ultimately affecting program and societal outcomes. In addition, this study attempted to understand the differences between perceptions of readiness based on secured vs. community correctional settings. The data in this study was analyzed using ordinary least squares.

This study found that an administrative champion is not associated with perceived organizational readiness, inadequate technology increases perceived organizational readiness, training (value) is negatively related to perceived organizational readiness, bi-directional communication is negatively associated with perceived organizational readiness, the type of correctional setting does influence perceived organizational readiness, and employee experience has a positive effect on perceived organizational readiness. These results are contrary to research, but still provide important information about organizational change in correctional settings.

These results demonstrate the tension that is inherent between administrators and researchers who develop change programs. What theoretically works in pilot settings may

not apply in real life settings. Second, the study shows that context matters. While many of the indicators identified in this study have had significant effects on organizational readiness, the results were not the same in a correctional setting. This may be the case with all command and control settings. These results are important because they help practitioners understand the context in which they will be working when trying to implement a change.

Ultimately, this study has shown that correctional settings are unique to other settings when implementing a change. The factors that are important in most settings for organizational readiness do not hold true for a correctional setting. The context matters and change designers need to be aware of the context, as well as other environmental factors that may encourage or impede an implementation. This exploratory study serves to increase literature around organizational readiness in correctional settings, and offers a platform for future explanatory research on the topic.

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APPENDICES

Appendix A – Bivariate Correlations

	ORC	Goal	Champ	Tech	Train	BiCom	CType	CSet	EmEx	Unit/program - years	Agency - years	Position - years
ORC												
Pearson	1	-.453**	.164*	.253**	-.333**	.040	-.070	-.125	.075	-.116	.148*	-.096
Sig.		.000	.020	.001	.000	.591	.320	.088	.292	.100	.035	.172
N	205	205	205	205	205	205	205	205	205	205	205	205
GoalClarity												
Pearson	-.453**	1	.327**	-.206*	.318**	-.011	.069	.037	.056	.158*	.129	.058
Sig.	.000		.000	.011	.000	.889	.354	.664	.473	.028	.111	.446
N	205	205	205	205	.205	205	205	205	205	205	205	205
AChamp												
Pearson	.164*	.327**	1	.015	.363**	-.044	-.062	-.003	-.026	.083	.005	.009
Sig.	.020	.000		.831	.000	.565	.393	.973	.716	.243	.940	.896
N	205	205	205	205	205	205	205	205	205	205	205	205
Technology												
Pearson	.253**	-.206*	.015	1	-.053	-.109	.052	-.001	.046	-.116	-.064	-.090
Sig.	.001	.011	.831		.581	.138	.467	.984	.520	.101	.379	.198
N	205	205	205	205	205	205	205	205	205	205	205	205
Training Value												
Pearson	.333**	.318**	.363**	-.053	1	-.044	.016	.008	.200**	.232**	.241**	.209**
Sig.	.000	.000	.000	.581		.546	.828	.920	.007	.001	.001	.003
N	205	205	205	205	205	205	205	205	205	205	205	205
BiComm												
Pearson	.040	-.011	-.044	-.109	-.044	1	-.171*	-.238**	.029	-.059	-.037	-.073
Sig.	.591	.889	.565	.138	.546		.032	.002	.714	.467	.629	.385
N	205	205	205	205	205	205	205	205	205	205	205	205
CorrectionalType												
Pearson	-.070	.069	-.062	.052	.016	-.171*	1	.518**	-.004	.075	-.024	.021
Sig.	.320	.354	.393	.467	.828	.032		.000	.956	.286	.738	.768
N	205	205	205	205	205	205	205	205	205	205	205	205
CorrectionalSetting												
Pearson												
Sig.	.125	.037	-.003	-.001	.008	-.238**	.518**	1	-.077	.117	-.006	.091
N	.088	.664	.973	.984	.920	.002	.000		.301	.100	.932	.206
	205	205	205	205	205	205	205	205	205	205	205	205

Correlations Continued

EmployeeExperience												
Pearson	.075	.056	-.026	.046	.200**	.029	-.004	-.077	1	.450**	.497**	.345**
Sig.	.292	.473	.716	.520	.007	.714	.956	.301		.000	.000	.000
N	205	205	205	205	205	205	205	205	205	205	205	205
Working at unit/program - years												
Pearson	-.116	.158*	.083	-.116	.232**	-.059	.075	.117	.450**	1	.621**	.513**
Sig.	.100	.028	.243	.101	.001	.467	.286	.100	.000		.000	.000
N	205	205	205	205	205	205	205	205	205	205	205	205
Working at agency - years												
Pearson	-.148*	.129	.005	-.064	.241**	-.037	-.024	-.006	.497**	.621**	1	.563**
Sig.	.035	.111	.940	.379	.001	.629	.738	.932	.000	.000		.000
N	205	205	205	205	205	205	205	205	205	205	205	205
Working in position - years												
Pearson	-.960	.058	.009	-.090	.209**	-.072	.021	.091	.345**	.513**	.563**	1
Sig.	.172	.446	.896	.198	.003	.385	.768	.206	.000	.000	.000	
N	205	205	205	205	205	205	205	205	205	205	205	205

Appendix B - Bivariate Correlations II

		ORC	AChamp	Technology	Training Value	BiComm	Correctional Setting	Working in corrections/ treatment - years
ORC	Pearson Correlation	1	-.172*	.222**	-.347**	.056	-.061	.062
	Sig. (2-tailed)		.014	.001	.000	.429	.386	.375
	N	205	205	205	205	200	205	205
AChamp	Pearson Correlation	-.172*	1	.033	.369**	-.023	-.088	-.037
	Sig. (2-tailed)	.014		.640	.000	.745	.211	.601
	N	205	205	205	205	200	205	205
Technology	Pearson Correlation	.222**	.033	1	.027	-.123	.031	.065
	Sig. (2-tailed)	.001	.640		.703	.082	.662	.351
	N	205	205	205	205	200	205	205
Training Value	Pearson Correlation	-.347**	.369**	.027	1	-.038	.008	.218**
	Sig. (2-tailed)	.000	.000	.703		.590	.911	.002
	N	205	205	205	205	200	205	205
BiComm	Pearson Correlation	.056	-.023	-.123	-.038	1	-.180*	.020
	Sig. (2-tailed)	.429	.745	.082	.590		.011	.779
	N	200	200	200	200	200	200	200
Correctional Setting	Pearson Correlation	-.061	-.088	.031	.008	-.180*	1	-.003
	Sig. (2-tailed)	.386	.211	.662	.911	.011		.968
	N	205	205	205	205	200	205	205
Working in corrections/ treatment - years	Pearson Correlation	.062	-.037	.065	.218**	.020	-.003	1
	Sig. (2-tailed)	.375	.601	.351	.002	.779	.968	
	N	205	205	205	205	200	205	205

Appendix C - Missing Values Analysis

Univariate Statistics Per Item

	N	Missing	
		Count	Percent
BSOC1B03	201	4	2.0
BSOC1B16	202	3	1.5
BSOC1B25	201	4	2.0
BSOC1D56	200	5	2.4
BSOC1D57	199	6	2.9
BSOC1D58	202	3	1.5
BSOC1D59	202	3	1.5
BSOC1D60	202	3	1.5
BSOC1D61	202	3	1.5
BSOC1D62	202	3	1.5
BSOC1D63	199	6	2.9
BSOC1B11	203	2	1.0
BSOC1B13	202	3	1.5
BSOC1D19	201	4	2.0
BSOC1D30	192	13	6.3
BSOC1D55	199	6	2.9

Univariate Statistics Per Item Continued

BSOC1C07	203	2	1.0
BSOC1A11	199	6	2.9
BSOC1A12	202	3	1.5
BSOC1A13	202	3	1.5
BSOC1A14	202	3	1.5
BSOC1A15	201	4	2.0
HSS1402	191	14	6.8
HSS1403	192	13	6.3
HSS1404	190	15	7.3
HSS1405	191	14	6.8
HSS1406	192	13	6.3
HSS1407	196	9	4.4
HSS1408	191	14	6.8
HSS1413	193	12	5.9
HSS1414	191	14	6.8
HSS1415	192	13	6.3
HSS1416	192	13	6.3
HSS1417	191	14	6.8
SITEID	205	0	.0
Employee Experience	204	1	.5

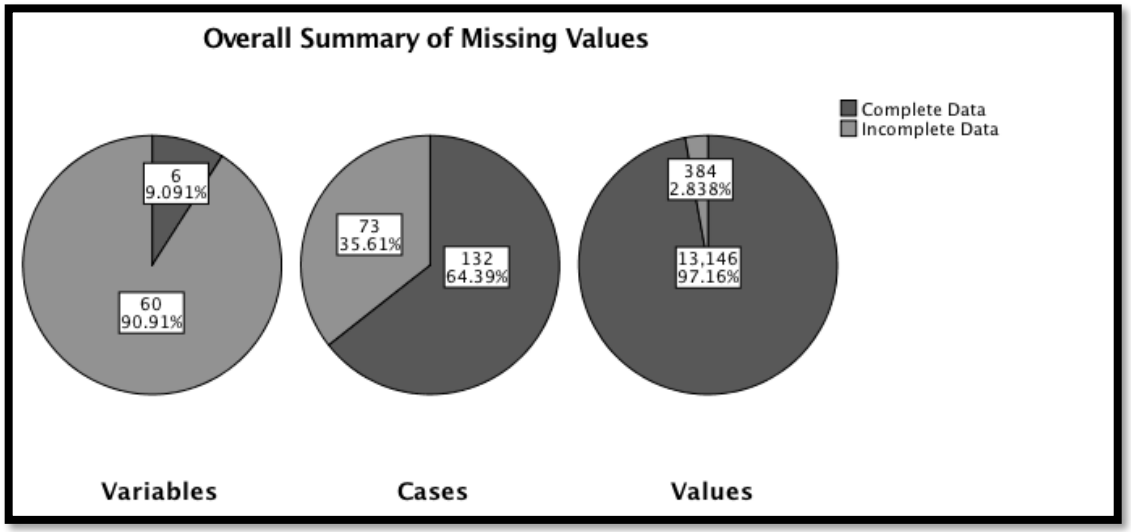
Univariate Statistics Per Item Continued

YearsUnit	205	0	.0
YearsAgency	205	0	.0
YearsPostion	205	0	.0
CorrectionalType	205	0	.0
CorrectionalSetting	194	11	5.4

Missing Cases By Item

	HSS 1407	HSS 1413	HSS 1406	HSS 1402	HSS 1404	HSS 1414	HSS 1417	HSS 1416	HSS 1415	HSS 1401	HSS 1403	HSS 1405	HSS 1408
# of Cases													
132													
5													
3	X	X	X	X	X	X	X	X	X	X	X	X	X

Summary of Missing Values



Appendix D – CATPCA

Factor Reduction

Variable	Survey Items Removed	Process & Rationale
Perceived Organizational Readiness (Group Referenced)	**BSOC (growth):** 7. Your unit encourages and supports professional growth. **BSOC (program needs):** 16. improving relations among staff. 17. improving communications among staff. 18. improving record keeping and information systems. 19. improving funding for contracted services. **BSOC (pressures for change):** Current pressures to make changes in your unit come from – 27. the offenders being served. 28. other staff members. 29. unit supervisors or managers. 30. government policy makers. 31. community groups. 32. government funding bodies (e.g., legislature) 33. accreditation or licensing authorities. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	1. An initial factor analysis was performed, which showed that BSOC (growth), BSOC (program needs) and BSOC (pressures for change) displayed several dimensions. 2. Looking to the literature, this research decided to remove the dimension that looked at BSOC (pressures for change), as pressure to change may not equal readiness to change. In addition, BCOC (growth) was removed, as its factor loadings were not similar to the other dimensions. 3. A second factor analysis was performed on BSOC (program needs) and showed that items 11-15 were a separate dimension from items 16-19. Items 16-19 were removed because they looked at very specific changes in an organization, not over all readiness for change. 4. Reliability analysis performed. Results below. 5. Items combined additively using "Compute Variable" function in SPSS. Each item was added and new indexed variable named.

Factor Reduction Continued

Goal Clarity (Motivation)	**BSOC (mission):** 1. Some staff members seem confused about the main goals for your program. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	1. An initial factor analysis was performed on the items of BSOC (mission), and the item "some staff members seem confused about the main goals for your program" did not have similar factor loadings to the other items. The rest of the items were one dimension. 2. Reliability analysis performed. Results below. 3. Items combined additively using "Compute Variable" function in SPSS. Each item was added and new indexed variable named.
Technology (Capacity)	**BSOC (equipment):** 7. Computer problems are usually repaired promptly at your program. 14. Most client records for your program are computerized. 26. Staff in your program feel comfortable using computers. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	1. An initial factor analysis was performed on the items of BSOC (equipment), and revealed two dimensions: "equipment at your program is mostly old and outdated, and more computers are needed for staff in your program to use" and "computer problems are usually repaired promptly at your program, most client records for your program are computerized and staff in your program feel comfortable using computers". 2. The items from the dimension that included "computer problems are usually repaired promptly at your program, most client records for your program are computerized and staff in your program feel comfortable using computers" were removed, as the other dimension displayed the needs of the employees, rather than their skills. 3. Reliability analysis performed. Results below. 4. Items combined additively using "Compute Variable" function in SPSS. Each item was added and new indexed variable named.

Factor Reduction Continued

Training	**BSOC (training):** 23. Staff training and continuing education are priorities in your unit. 24. Your unit holds regular inservice training. 25. The budget in your program allows staff to attend professional training. **BSOC (training needs):** Your staff needs more training for – 20. basic computer skills/programs. 21. specialized computer applications (e.g., data systems). 22. new methods/developments in their areas of responsibility. 23. new equipment or procedures being used or planned. 24. obtaining certifications or promotion. 25. new laws or regulations they need to know about. 26. management or supervisory responsibilities. **(1=strongly disagree; 2=disagree; 3=neither agree nor disagree; 4=agree; 5=strongly agree)**	1. An initial factor analysis was performed on the items of BSOC (training) and BSOC (training needs). This factor analysis showed that these are two separate dimensions. Theoretically, BSOC (training) measures current training practices, while BSOC (training needs) assesses the training needed in the organization. 2. BSOC (training needs) was removed as this study is assessing current training practices on organizational readiness. 3. A second factor analysis was conducted and item "the budget in your program allows staff to attend professional training" did not have similar factor loadings to the other items. 4. Reliability analysis performed. Results below. 5. Items combined additively using "Compute Variable" function in SPSS. Each item was added and new indexed variable named.

CATPCA Final Results

Variable	% of Variance Accounted For	Survey Item	Component Loadings
Perceived Organizational Readiness	72.095	BSOC: Organization/unit help defining mission	.817
		BSOC: Organization/unit help with goal setting	.829
		BSOC: Organization/unit help assigning staff roles	.866
		BSOC: Organization/unit help with job descriptions	.892
		BSOC: Organization/unit help evaluating staff performance	.839
Goal Clarity	73.929	BSOC: Clear unit goals, objectives	.860
		BSOC: Staff understand goals as part of corrections	.860
Administrative Champion	76.614	BSOC: Inspire others with plans	.872
		BSOC: Lead unit by example	.903
		BSOC: Get people working together	.883
		BSOC: Treat staff as individuals	.882
		BSOC: Encourage new ways	.849
		BSOC: Give special recognition	.853
		BSOC: Define performance goals, objectives	.891
		BSOC: Innovate before most other managers	.868
		BSOC: Inspire others with plans	.872
Technology	73.017	BSOC: Outdated equipment	.854
		BSOC: Need more computers	.855

CATPCA Final Results Continued

Training Value	80.706	BSOC: Training a priority	.898
		BSOC: In-service trainings	.898
Bi-Directional Communication	82.163	HIV staff survey: Share funding	.826
		HIV staff survey: Share facility space	.906
		HIV staff survey: Share recordkeeping, management information systems	.874
		HIV staff survey: Share program and services developing	.954
		HIV staff survey: Share information about services	.946
		HIV staff survey: Share case reviews	.928
		HIV staff survey: Share informal agreements	.905

Reliability Analysis

Variable	Cronbach's Alpha	N of Items
Perceived Organizational Readiness		
Original data	.879	5
Imputation 1	.869	5
Imputation 2	.861	5
Imputation 3	.866	5
Imputation 4	.871	5
Imputation 5	.867	5

Reliability Analysis Continued

Goal Clarity		
Original data	.591	2
Imputation 1	.601	2
Imputation 2	.561	2
Imputation 3	.476	2
Imputation 4	.624	2
Imputation 5	.557	2
Administrative Champion		
Original data	.952	9
Imputation 1	.946	9
Imputation 2	.935	9
Imputation 3	.947	9
Imputation 4	.948	9
Imputation 5	.945	9
Technology		
Original data	.616	2
Imputation 1	.658	2
Imputation 2	.629	2
Imputation 3	.592	2
Imputation 4	.583	2
Imputation 5	.610	2

Reliability Analysis Continued

Training Value		
Original data	.709	2
Imputation 1	.746	2
Imputation 2	.782	2
Imputation 3	.694	2
Imputation 4	.708	2
Imputation 5	.696	2
Bi-Directional Communication		
Original data	.908	7
Imputation 1	.899	7
Imputation 2	.892	7
Imputation 3	.898	7
Imputation 4	.917	7
Imputation 5	.884	7

Appendix E – SPSS Keystrokes

Calculate Intra-Class Coefficient

1. Select Analyze, Mixed Models, and Specify Subject and Repeated. Enter SITE ID as the Subjects. Nothing was entered into the Repeated area because this is the null model.
2. From the Main Window, under the Fixed Button, “include intercept” was clicked. No predictors are identified for the null model, but the dependent variable was entered.
3. From the Main Window, the Random Button was clicked for the Random Effects Window. The grouping variable, Correctional Setting was moved into the Subjects/Combinations area, and “include intercept” is checked.
4. The Statistics Button was clicked to choose the appropriate output. This study chose the Model Dimensions to show the parameters to be estimated; Information Criteria, to display deviance and fit measures; Type III Tests of Fixed Effects, to display the test of level 1 intercept; Estimates of Covariance Parameters, to show the values associated with the random effects at level 2; and Descriptive Statistics, to help spot outliers.
5. Run model.

LMM Procedure

1. Selected Analyze, Mixed Models, Linear, and Specify Subject and Repeated. Entered SITE ID as the Subjects. Nothing was entered into the Repeated area as this study is cross-sectional.
2. On the Mixed Models screen, ORC was entered as the dependent variable. Correctional Setting and Experience were entered as factors, AChamp, BiComm_1, Training Value, and Technology were entered as covariates.
3. On the Fixed Effects tab, all predictors were entered as main effects.
4. On the Random Effects screen, SITE ID was made the "Subjects-Combinations" variable, and the intercept was requested.
5. The default is accepted for the Estimates Button. The model fit measures are selected from the Statistics Button. The model was run without warnings. The results of this analysis will be presented in Chapter Four.

OLS Procedure

1. Select Analyze -> Regression -> Linear (Pooled)
2. ORC is entered as the dependent variable, AChamp, BiComm_1, Experience, Technology, Training Value, and Correctional Setting are entered as independents.
3. Under Statistics, "Descriptives" is chosen.
4. Click Run.

Appendix F - Bibliographic Search

Research Questions:	(1). What organizational characteristics lead to organizational readiness for change in correctional settings when preparing for a change? (2) Does the type of correctional setting matter?	
Databases Used:	Summon, Google Scholar	
Database Searched	**Search Terms Used & Limits Applied *all peer reviewed only***	**Results**
Summon	"organizational readiness for change"	33,773
	"organizational readiness for change", since 2006	20,885
	"organizational readiness for change", last 5 years	10,123
	"organizational readiness for change correctional setting"	380
	"organizational readiness for change correctional setting", since 2006	223
	"implementation science", last 5 years	566,499
	"implementation science", last 5 years	1672
	"Interactive systems framework"	190,434

Bibliographic Search Continued

	“Interactive systems framework”, since 2006	120,010
	“organizational readiness, interactive systems framework”	4043
	“bi-directional communication, interactive systems framework”, since 2012	395
	“Implementation, organizational readiness”, since 2012	26,559
	“motivation organizational readiness”, since 2012	4579
	“capacity organizational readiness”, since 2012	5422
	“goal clarity organizational readiness”, since 2012	1324
	“HIV correctional settings implementation”, since 2012	483
	“Goal displacement organizational readiness”, since 2012	123
	“evidence based programs correctional settings”	2744
	“leadership, organizational readiness”, since 2012	5354
	“organizational change”	155,971
	“goal congruence organizational readiness”, since 2012	355
	“technology organizational readiness”, since 2012	6685
	“correctional setting organizational readiness”, since 2012	115
	“correctional setting implementation”	6849
	“measuring organizational readiness”, since 2012	3530
	“culture organizational readiness”, since 2012	6463
	“change management”	1,165,081

Bibliographic Search Continued

	“correctional settings HIV”	3775
	“administrative champion organizational readiness”, since 2012	403
	“organizational entrenchment”	4302
	“training organizational readiness”, since 2012	7259
	“diffusion policy implementation”	59,788
Google Scholar	“organizational readiness for change correctional setting”	22,100
	“organizational readiness for change correctional setting”, since 2012	8,200
	“organizational readiness for change”	257,000
	“organizational readiness for change”, since 2012	21,400